

Is Emotion Regulation the Key to Breaking the Cycle of Violence? The Roles of Emotion Regulation in Buffering the Effects of a Childhood History of Maltreatment on Intimate Partner Violence in Emerging Adulthood

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Extant literature has demonstrated that having adverse childhood experiences (e.g., child maltreatment, domestic violence, etc.) would place trauma survivors at high risk for experiencing emotion dysregulation and violence later in life. While a sizable body of literature has investigated direct effects and indirect effects of a history of childhood maltreatment on experiences of intimate partner violence (IPV) in adulthood, only a few studies have tested the mediating effect of emotion dysregulation on the relationship between a history of childhood maltreatment and IPV exposure in adulthood. Particularly, since the pathways from a history of childhood maltreatment to experiences of IPV in adulthood have been primarily examined in cross-sectional studies, little is known about the long-term effects of childhood experiences of maltreatment on the trajectories of IPV exposure in emerging adulthood, in which the rate of IPV is the highest in adulthood. In addition, most of these studies examined only a single type and form of IPV. To fill this gap, the current study conducted secondary data analysis using data from the Pittsburgh Girls Study (PGS), which is a longitudinal survey of an urban community sample of girls. Latent growth curve modeling was used to examine the direct effects of a history of childhood maltreatment on risk of both IPV perpetration and victimization over time and to test whether these effects would be mediated by emotion dysregulation. The results of the study indicated that a history of childhood maltreatment was significantly associated with an initial level of risk for IPV exposure. Importantly, a history of childhood emotional abuse was significantly associated with a higher

level of emotion dysregulation, which in turn increased the initial levels of risk for IPV exposure. These significant findings on the mediating effect of emotion dysregulation suggest important implications for social work practice. Specifically, it is critical for social workers to early identify the population who have a history of childhood emotional abuse and provide them with interventions targeting emotion dysregulation, thereby protecting them from later exposure to IPV.

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1.0 Introduction

1.1 Statement of the Problem and Its Importance to Social Work

1.1.1 Child Maltreatment

According to the Children's Bureau's annual child maltreatment report for federal fiscal year (FFY) 2019, approximately 656,000 children were reported to CPS as victims of child abuse and neglect (U.S. Department of Health & Human Services; U.S. DHHS, 2020). The report indicated that 554,320 (84.5%) experienced a single type of child maltreatment, and 101,680 (15.5%) experienced two or more than two types of child maltreatment (U.S. DHHS, 2020). Of those with experiences of a single type of child maltreatment, over half of them (61%) experienced neglect, followed by those who were physically abused (10.3%) and those who were sexually abused (7.2%). For FFY 2019, children in the United States died of child abuse and neglect at a rate of 2.50 per 100,000 children, a rate which had increased from 2015 when the children died at a rate of 2.23 per 100,000. The child fatality rate was the highest (22.9%) in children younger than 1 year old. Although the child fatality rate decreased with age, the fatality rate still remained over 1% until the children reached age six, after which rates decreased (U.S. DHHS, 2020). Notably, approximately 39.0% of the child victims were maltreated only by a mother, 22.6% were maltreated by a father alone, and 21.0% were maltreated by both parents (U.S. DHHS, 2020).

Given the high prevalence of child maltreatment perpetrated by parents, it is important to identify risk factors that put parents at high risk for perpetrating child maltreatment and address the risk factors to prevent child maltreatment. Of the multiple risk factors, a history of childhood

maltreatment has been widely identified as a significant factor that increases the risk for perpetrating not only child maltreatment but other types of violence. To break the cycle of violence, it seems critical to understand the mechanisms by which a history of childhood maltreatment is linked to exposure to violence later in life.

1.1.2 Intergenerational Transmission of Violence

The effects of experiences of childhood maltreatment on exposure to several types of violence later in life have been investigated in earlier works. For example, Kaufman and Zigler (1987) reviewed studies of intergenerational transmission of child maltreatment (ITCM) and evidenced that a parental history of childhood maltreatment is associated with an increased risk for maltreating their own child. However, Kaufman and Zigler (1987) pointed out that not all parents who had childhood experiences of maltreatment abuse or neglect their own children and asserted that some protective factors can break this vicious cycle of child maltreatment across generations. For example, one study revealed that maltreated mothers who had not maltreated their own children were more likely to have emotionally supportive relationships with a foster parent, non-abusive parent, or intimate partner during their lifetimes, compared to those who had maltreated their own children, indicating emotional support as a buffer against ITCM (Egeland et al., 1988). Importantly, Kaufman and Zigler (1987) noted that the results of these studies should be interpreted with caution due to the methodological limitations (e.g., non-representative study samples, inconsistent definitions of child maltreatment, confounding effects, etc.). Specifically, Kaufman and Zigler (1987) said that the prevalence of ITCM might be overestimated if the study collected data only from maltreated mothers, who were low-income and single mothers, because low socioeconomic status and single parenthood were identified to elevate the risk for child

maltreatment perpetration. Thus, to accurately test the theory of ITCM, diverse contextual factors (e.g., socioeconomic status and emotionally supportive relationships) that could serve as confounders should be taken into account.

In another seminal review study, Widom (1989) investigated the association between a history of childhood maltreatment and exposure to violence later in life. In the study, Widom (1989) revealed that a history of childhood maltreatment was significantly associated with an increased risk for being involved in delinquent behavior and criminal behavior during adolescence and adulthood. Yet, the study stressed that not all maltreated children became offenders by pointing to the methodological limitation of sampling bias, which was due to the oversampling of the maltreated children from low-income and minority families. Widom (1989) asserted that data about demographic characteristics (e.g., sex, race, age, income, etc.) should be collected and controlled to accurately estimate the likelihood of the intergenerational transmission of violence. In a recent meta-analysis of research on the intergenerational transmission of violence, a small to moderate effect size ($d=0.45$) was identified; the effect size remained significant regardless of the methods of measuring child maltreatment (Madigan et al., 2019). However, Madigan et al. (2019) found that the effect size of a parental history of childhood physical abuse on the parent's perpetration of child physical abuse decreased after controlling for the studies' quality of methodology (e.g., demographic comparability, definitions of child maltreatment, etc.). From these mixed findings on the intergenerational transmission of violence, it can be argued that the hypothesis of intergenerational transmission of violence would not always be true if the methodological limitations or confounding effects (e.g., sampling bias) were taken into account.

1.1.3 Emotion Dysregulation

Considering the methodological limitations of prior research on the intergenerational transmission of violence, the hypothesis of the intergenerational transmission of violence can possibly be rejected. In other words, identifying the significant risk factors, which mediate the pathways from a history of childhood maltreatment to exposure to violence in adulthood, and addressing these risk factors can contribute to discontinuing the intergenerational transmission of violence. For example, Widom (1989) proposed that emotional problems can serve as a risk factor that connects the childhood experiences of maltreatment to later violent behavior. In this sense, emotion dysregulation, which is defined as an individual's lack of ability to control negative emotions, can be thought of as a key factor that heightens the risk for the intergenerational transmission of violence (Garner & Spears, 2000; Kopp, 1989). Emotion regulation researchers particularly emphasized the important roles of caregivers because children are thought to learn from their caregivers how to control distress, discomfort, and negative emotions during infancy and early childhood. The emotion regulation researchers also stressed that children learn emotion regulatory skills by interacting with caregivers in early childhood—infancy and toddlerhood, preschool years—and later childhood (Cole et al., 1994; Linehan, 1993; Thompson, 1994). From this perspective, parents who have experiences of IPV or maltreat their own child may not be able to closely interact with their child. In addition, children of these parents may fail to learn self-regulation and regulation of the range of emotions, disrupting their reliable interpersonal relationships with others throughout their lifetimes (Cole et al., 1994). Moreover, Thompson (1994; 2019) viewed emotion regulation as intrinsic and extrinsic processes by which emotional reactions occur to achieve individuals' goals (primarily socialization) and meet social standards. Taken together, if the caregivers abused or neglected their children and did not provide their

children with resources for emotion regulation, it is possible that the maltreated children might face challenges with developing emotion regulatory strategies and interacting with others.

Expanding on earlier work, Gratz and Roemer (2004) defined emotion regulation as an individual's ability to accept negative emotions rather than to eliminate or diminish negative emotions. According to Gratz and Roemer (2004), individuals having emotion regulation are expected to be aware of the ranges of emotions, accept the emotions, control impulsive behavior, and employ emotion regulatory strategies in order to achieve individual goals as well as meet social expectations. Particularly, Gratz and Roemer developed the *Difficulties in Emotion Regulation Scale*, (DERS; Gratz & Roemer, 2004), which is a multidimensional assessment of emotion dysregulation. The DERS has six subscales to assess multiple aspects of emotion dysregulation (e.g., nonacceptance of emotion responses, impulsivity, lack of emotional awareness, etc.) and has demonstrated high internal consistency, good test-retest reliability, and adequate construct and predictive validity (Gratz & Roemer, 2004). Gratz and Roemer (2004) tested predictive validity by assessing incidents of IPV as an indicative behavior of emotion dysregulation. It was found that the overall DERS score was significantly related to IPV perpetration only in men, whereas impulsive behavior, one of the constructs of DERS, was significantly associated with IPV perpetration in both men and women (Gratz et al., 2009). In addition, the study discovered that emotion dysregulation fully mediated the effects of childhood maltreatment on perpetration of IPV in men, which was not true for women (Gratz et al., 2009). However, since none of these studies measured the bidirectionality of IPV (both perpetration and victimization) using the same sample, and men are more likely than women to show aggressive behavior and commit violence (Flood & Pease, 2009; Jakupcak et al., 2002; O'Neil & Harway, 1997), the results might differ if the studies measured both IPV perpetration and victimization.

Given that emotion dysregulation is significantly related to both child maltreatment and IPV exposure, it is worth examining the roles of emotion dysregulation in mediating the pathways from a history of childhood maltreatment to IPV exposure later in life. Indeed, a few studies have demonstrated the mediating effects of emotion dysregulation on the pathways from a history of childhood maltreatment to later exposure to IPV (Berzenski & Yates, 2010; Gratz et al., 2009; Herrenkohl et al., 2004). Notably, it has been found that the mediating effects of emotion dysregulation on the pathways vary by gender. Specifically, women with a history of childhood maltreatment are at greater risk for emotion dysregulation and IPV exposure in adulthood, as compared to men (Berzenski & Yates, 2010; Herrenkohl et al., 2004). From the findings on the gender difference, it can be suggested that child protective service case workers (CPS) and social workers need to be trained to screen for those who are at high risk for emotion dysregulation and the intergenerational transmission of violence (mostly women). Specifically, screening for emotion dysregulation can be best served by using brief and valid measures of emotion dysregulation, such as the *General Emotion Dysregulation Measure* (GEDM; Newhill et al., 2004), which has demonstrated good reliability and validity (Newhill et al., 2010). Early assessment not only helps the high-risk population receive interventions targeting the key risk factors (e.g., childhood maltreatment, emotion dysregulation) but protects the high-risk population from being exposed to IPV later in life. Consequently, all of these can contribute to discontinuing the intergenerational transmission of violence.

1.1.4 Intimate Partner Violence (IPV)

The World Health Organization (WHO) identifies IPV as a global health problem and defines it as behavior within an intimate partner relationship that causes physical, psychological,

or sexual harm to those in the relationship (World Health Organization, 2012). The Centers for Disease Control and Prevention (CDC) also states that IPV is violence or aggression that occurs within an intimate partner relationship and that intimate partners include current and former spouses and dating partners who have romantic relationships. The CDC specifies four types of IPV—physical violence, sexual violence, stalking, and psychological aggression. Physical violence is defined as the intentional use of physical force with the potential for causing death, disability, injury, or harm; sexual violence is defined as a sexual act that is committed or attempted by another person without freely given consent of the victim or against someone who is unable to consent or refuse; stalking includes repeated, unwanted attention and contact causing fear or concern for one’s own safety or the safety of someone else, such as a family member; and psychological aggression is the use of verbal and non-verbal communication with the intent to harm another person mentally or emotionally and/or to exert control over another person.

Acknowledging IPV as a public health concern, the CDC initiated the National Intimate Partner and Sexual Violence Survey (NISVS), which is the first national- and state-level IPV survey to examine the prevalence of IPV. According to the most recently collected data from the 2015 NISVS, approximately 30 million (25.1%) women and 12.1 million (10.9%) men in the U.S. were reported as having experienced contact sexual violence, physical violence, and/or stalking by an intimate partner during their lifetimes, as well as some forms of IPV-related impact (Smith et al., 2018). During the past 12 months, almost 6.6 million (5.5%) women and 5.8 million (5.2%) men in the U.S. were identified as having experienced contact sexual violence, physical violence, and/or stalking by an intimate partner. Women in the U.S. seem to be two times more likely than men to have a lifetime history of IPV victimization. The majority of female victims experienced psychological aggression (36.4%), physical violence (30.6%), contact sexual violence (18.3%),

and stalking (10.4%) during their lifetimes. Of the male victims, 34.2% experienced psychological aggression; 31% had experiences of physical violence; 8.2% experienced contact sexual violence; and 2.2% had experiences of stalking. While a comparable number of female and male victims experienced psychological aggression and physical IPV, female victims were more likely than men to experience contact sexual violence and stalking.

In the 2014 NISVS report, there were differences in the prevalence rates of IPV victimization according to race/ethnicity (Breiding, 2014). Multiracial women in the U.S. had the highest prevalence of experiencing rape (11.4%), sexual IPV other than rape (26.8%), and stalking (13.3%), as compared to other racial/ethnic groups (Breiding, 2014). However, physical IPV (51.7%) and psychological aggression (63.8%) were the most prevalent among American Indian/Alaskan Native women. Second to American Indian/Alaskan Native women, multiracial women also had higher rates of physical IPV (51.3%) and psychological aggression (61.1%) than other racial/ethnic groups (i.e., Hispanic, non-Hispanic black, non-Hispanic white, and Asian or Pacific Islander) (Breiding, 2014). Based on these findings, women from the underrepresented racial/ethnic groups appear to be at higher risk for experiencing IPV victimization.

The prevalence of IPV victimization in women by sexual orientation was also examined (Black et al., 2011). Notably, bisexual women had a significantly higher prevalence (61.1%) of experiencing IPV victimization, as compared to the other two groups—lesbian (43.8%) and heterosexual women (35%). In contrast, men did not show any significant difference in the rate of IPV victimization by sexual orientation (Black et al., 2011). Given the findings on the different prevalence rates of IPV victimization across race/ethnicity and sexual orientation, it can be argued that women who are from underrepresented racial/ethnic groups, as well as bisexual women, are at higher risk for IPV victimization. (Meyer, 2013; Reuter et al., 2017).

In a recent study using a sample of sexual minority adults (i.e., lesbian, gay, and bisexual adults), latent-class analysis was performed to identify high-risk adults who had a history of childhood maltreatment, experiences of IPV victimization in adulthood, and mental/behavioral health problems, including emotion dysregulation (Charak et al., 2019). In the study, both men and women with bisexual identities were more likely to have a history of childhood maltreatment. Specifically, more bisexual women had childhood experiences of maltreatment than did bisexual men. As for racial/ethnic identities, a high-victimization class included adults who had the highest probabilities of experiences of childhood maltreatment (range: 0.91-0.98) and adulthood sexual cyber IPV (range: 0.043-1.00). In addition, the high-victimization class had a fewer number of non-Hispanic whites than did other classes, indicating that the underrepresented racial/ethnic groups are at high risk for child maltreatment and IPV victimization. Noticeably, the high-victimization class exhibited higher levels of emotion dysregulation than did the low-victimization class.

Although these studies did not provide explanations for the high rates of IPV victimization among women with intersectional identities, some IPV researchers have examined why IPV is prevalent among sexual minority populations (Balsam & Szymanski, 2005; Carvalho et al., 2011; Reuter et al., 2017). Drawing on a minority stress framework, these studies have posited that sexual minority populations are subject to exposure to minority stressors, such as stigma and discrimination based upon sexual orientation. In addition, these minority stressors are identified as being significantly associated with emotion dysregulation (Hatzenbuehler, 2009), which in turn elevates the risk of IPV exposure (Edwards et al., 2015). It has been further stated that the sexual minority populations with other multiple identities (race/ethnicity, age, etc.) are more vulnerable to the minority stressors and high levels of minority stress, placing them at greater risk for

experiencing IPV (Balsam & Szymanski, 2005; Reuter et al., 2017). To support the previous findings, more research needs to be replicated to demonstrate how intersectional identities and minority stress interact with emotion dysregulation and IPV risk in the high-risk group, particularly sexual minority women.

1.1.5 Importance to Social Work

As mentioned above, existing literature on the intergenerational transmission of violence has indicated that adult survivors of childhood maltreatment are at greater risk of being involved in violence later in life. Particularly, some researchers have asserted that there are key factors that play pivotal roles in connecting the pathways from a history of childhood maltreatment to exposure to violence later in life, perpetuating the intergenerational transmission of violence. Given that emotion dysregulation has been identified as a key risk factor that significantly connects the long pathways, it is critical for social workers to early identify high-risk populations who have a history of childhood maltreatment and emotion dysregulation in order to protect them from being exposed to IPV. Importantly, since it has been found that women from underrepresented groups are at higher risk of being involved in the vicious cycle of violence, social workers should immediately provide high-risk women with interventions to reduce the risk of emotion dysregulation and IPV. Additionally, more studies should examine which key factors significantly contribute to the intergenerational transmission of violence and how these key factors interplay, leading social workers to develop more effective intervention and prevention strategies.

2.0 Literature Background

The purpose of this chapter is to review the literature and identify how emotion dysregulation mediates the pathways from a history of childhood maltreatment to the risk for IPV later in life. Since the underlying mechanisms of intergenerational transmission of violence are complex, it is necessary to examine both the direct effects and indirect effects of a history of childhood maltreatment on exposure to IPV in adulthood. Specifically, it is critical to identify significant factors, such as gender, marital status, age, and emotion dysregulation, to account for the indirect effects of a history of childhood maltreatment on experiences of IPV in adulthood. In this chapter, the previous findings on how these factors play roles in explaining the long pathways are presented. Particularly, given the previous findings that women with a history of childhood maltreatment are at high risk for having emotion dysregulation and IPV exposure in adulthood, the current study focuses on investigating the role of emotion dysregulation in mediating the pathways from a history of childhood maltreatment to IPV exposure during emerging adulthood, in which the rate of IPV is the highest in adulthood. Identification of emotion dysregulation as a mediator is expected to guide social workers to provide the high-risk women with early interventions targeting emotion dysregulation; these interventions focused on emotion regulation would be more effective in breaking the cycle of violence.

2.1 Pathways from a History of Childhood Maltreatment to Experiences of IPV in Adulthood

Prior to exploring the mediating role of emotion dysregulation in the relationship between a history of childhood maltreatment and experiences of IPV in adulthood, it is important to examine the direct effects of childhood experiences of maltreatment on experiences of IPV in adulthood. A few meta-analytic reviews have demonstrated a weak to moderate relationship between a history of childhood maltreatment and experiences of IPV in adulthood (Li et al., 2019; 2020; Stith et al., 2000). For example, Stith et al.'s (2000) meta-analytic review of 24 studies found significant relationships between childhood exposure to domestic violence and experiences of IPV during adulthood ($r=.18$ for perpetration; $r=.17$ for victimization). Stith et al. (2000) measured both experiences of maltreatment and witnessing interparental violence during childhood. The effect sizes were significant and varied by the specific types of domestic violence and IPV (perpetration vs. victimization) (Stith et al., 2000). Specifically, while childhood maltreatment had a stronger association with IPV victimization ($r=.19$), witnessing interparental violence had a closer relationship with IPV perpetration ($r=.18$), suggesting that there could be interactions between types of domestic violence and types of IPV. Similarly, recent meta-analyses also identified significant associations between a history of childhood maltreatment and IPV victimization ($r=.18$) and IPV perpetration ($r=.16$) (Li et al., 2019; 2020).

This significant relationship between a history of childhood maltreatment and later IPV exposure in adulthood has also been documented in a few longitudinal studies (Ehrensaft et al., 2003; White & Widom, 2003; Widom et al., 2014). In a 20-year prospective study, for instance, Ehrensaft et al. (2003) revealed that exposure to interparental violence significantly predicted both IPV perpetration (OR=2.96) and victimization (OR=3.01), whereas childhood physical or sexual

abuse predicted only IPV perpetration (OR=2.14), after controlling for demographic factors. Another prospective cohort-design study found that a history of childhood maltreatment predicted an increased risk for experiencing IPV victimization (Widom et al., 2014). It is noticeable that those with a history of childhood physical abuse had the greatest likelihood of experiencing IPV victimization (OR=2.52), and those with experiences of any type of childhood maltreatment were almost two times more likely to experience IPV victimization (OR=1.60), as compared to those without a history of childhood maltreatment (Widom et al., 2014). Surprisingly, however, a history of childhood maltreatment was not significantly associated with the risk for IPV perpetration, except for child neglect (i.e., parents' deficiencies in childcare) (Widom et al., 2014). In summary, given that the relationship between a history of childhood maltreatment and experiences of IPV in adulthood varies by types of child maltreatment and IPV, it seems critical to identify key factors (e.g., types of child maltreatment, types of IPV, gender, etc.) that could better explain the inconsistent findings.

2.2 Potential Key Factors

2.2.1 Gender Differences

Previous studies have examined whether the pathways from a history of childhood maltreatment to experiences of IPV in adulthood would vary by gender, and these studies have yielded mixed findings. For instance, Stith et al. (2000) revealed that the effect of childhood exposure to domestic violence on experiences of IPV victimization was stronger for women than for men, whereas its effect on perpetration of IPV was weaker for women than for men. Similarly,

Whitfield and colleagues (2003) also discovered that while the odds of experiencing IPV victimization were greater for women, the odds of experiencing IPV perpetration were higher for men, lending credence to the prior evidence on the gender difference.

Although the extant literature has identified that both men and women with a history of childhood maltreatment are likely to be exposed to poor intimate partner relationships (Colman & Widom, 2004) and subsequent violence victimization by an intimate partner and non-intimate partner (Desai et al., 2002), relatively more studies have shown that women are at greater risk for IPV victimization in adulthood (Daigneault et al., 2009; Desai et al., 2002; Whitfield et al., 2003). For example, using a nationally representative sample, a longitudinal study reported that women with a history of childhood maltreatment were 61% more likely than men to experience IPV victimization in adulthood (Murphy, 2011). Another longitudinal study also indicated that gender served as a moderator of the relationship between childhood experiences of maltreatment and later IPV exposure in adulthood (Jung et al., 2019). Importantly, this study showed that women with a history of childhood physical and emotional abuse had a higher likelihood of experiencing psychological and physical violence, whereas men with a history of childhood physical and emotional abuse had a higher likelihood of experiencing multiple types of violence. More importantly, childhood experiences of sexual abuse predicted physical and psychological IPV only for women, supporting the previous evidence on the gender moderation effect. Given the gender effect, it is possible to assume that there would be specific gender-related risk factors placing women at an elevated risk for experiencing IPV in adulthood.

Although some studies have demonstrated the gender difference in the pathways, other studies have failed to identify significant gender effects. (Fergusson et al., 2006; Franklin & Kercher, 2012; Li et al., 2019). For example, Franklin and Kercher (2012) discovered that the odds

of experiencing any type of IPV perpetration and victimization did not vary as a function of gender among adults aged between 18 and 91 ($M_{age}=46.6$). In addition, Li et al.'s (2019) meta-analysis did not find any significant gender differences in the relationship between a history of childhood maltreatment and IPV victimization. Given the inconsistent findings, more research needs to investigate how specific gender-related factors are correlated with the risk of IPV exposure.

2.2.2 Marital Status

Extending the previous studies of gender differences, a few studies have tested whether marital status (e.g., married, cohabiting, and dating couples) would play a role in connecting the pathways from a history of childhood maltreatment to later IPV exposure in adulthood. Of the few studies, the findings on the moderating effects of marital status have been mixed. While relatively more studies have shown that dating couples are at greater risk for experiencing IPV in adulthood (Fang & Corso, 2007; Franklin & Kercher, 2012; Li et al., 2019), only a few studies have identified that there is no significant difference between married and non-married couples (Li et al., 2020), or that married couples are more likely to experience IPV (Kaufman-Parks et al., 2018; Renner & Whitney, 2012). For example, Franklin and Kercher (2012) found that married couples had a lower likelihood of experiencing physical IPV perpetration and any type of victimization, as compared to dating couples. Similarly, Fang and Corso (2007) indicated that young adult women who were married had a lower likelihood of experiencing IPV victimization, compared to those who were not married. Likewise, Li et al. (2019) also reported that there were significant differences in the effect sizes of childhood experiences of maltreatment on experiencing IPV victimization in adulthood between married couples and non-married couples, with a smaller effect size among

married couples. From these significant findings on marital status, it can be assumed that dating relationships may be a risk factor for IPV exposure in adulthood.

In contrast, Li et al. (2020)'s another meta-analysis of 63 studies discovered that the effects of a history of childhood maltreatment on perpetration of IPV in adulthood did not vary by marital status, suggesting that the effects of marital status would differ by types of IPV (perpetration vs. victimization). Since Li et al. (2019; 2020) tested the moderating effect of marital status on each type of IPV in separate meta-analyses, both types of IPV need to be measured together in the same study to accurately assess the moderating effect of marital status. In addition to the meta-analyses, one prospective study of young adults ($M_{age}=25.4$) examined the pathways from a history of childhood physical abuse to IPV perpetration in adulthood (Kaufman-Parks et al., 2018). Interestingly, the study revealed that married couples were 45% more likely and cohabiting couples were 54% more likely to perpetrate IPV, as compared to dating couples (Kaufman-Parks et al., 2018). Similarly, another study investigating risk factors of IPV in young adulthood ($M_{age}=21.8$) found that both married and cohabiting couples had greater odds of experiencing IPV, as compared to dating couples (Renner & Whitney, 2012). Given that young married couples are at greater risk for experiencing IPV, it is possible that the effects of marital status on the intergenerational transmission of violence might be significantly related to age-related risk factors, such as financial instability, early marriage, or early parenthood, which may in turn increase the risk of IPV. Thus, more future studies need to take both marital status and age-related stressors into consideration to test whether the moderating effects of marital status on the pathways would be significantly associated with younger age.

The mixed results of effects of marital status on the cycle of violence provide some critical directions for future studies in this area. First, most of these studies did not divide a large adult

population into subgroups by age. Instead, they focused on adulthood which has a broader age range (ages up to 90) than emerging adulthood (usually ages 18-25), leading to the inconsistent results. Since emerging adulthood has been identified as being significantly different from later adulthood in that a number of distinct transitions (e.g., independent living apart from parents, romantic relationships, employment) occur in emerging adulthood, emerging adults are thought to experience more unstable situations, as compared to older adults (Arnett, 2000). Thus, future studies need to divide the broader age range to focus on a high-risk age group, such as emerging adulthood, to effectively prevent the cycle of violence. In addition, many of these studies did not include measures of marital-status-related variables (e.g., age at marriage, the presence of a child in the home), which could explain the inconsistent results. Specifically, the previous research on the occurrence of IPV has found that the prevalence of IPV was higher among couples with a child over couples without a child (Bradley et al., 2002; McDonald et al., 2006). From the findings, it can be argued that the presence of a child in the household should be taken into account in order to gain a deeper understanding of the moderating effect of marital status on the pathways.

Moreover, most studies included in the meta-analyses used retrospective self-report measures to assess experiences of IPV. As such, it is possible that some married couples might underreport their experiences of IPV due to social desirability. In other words, the odds of IPV victimization would increase if future studies used objective measures of IPV victimization (i.e., police officer reports), since high prevalence rates of IPV have been reported by police officers (Fantuzzo et al., 1997). Also, police-reported IPV incidents have been identified as a reliable and valid data source (Fantuzzo et al., 2007; Fantuzzo & Fusco, 2007). Therefore, future research needs to employ diverse modes of data collection instruments (i.e., police officer reports and self-reports)

and to control for confounding factors, such as the presence of a child in the household in order to measure the experiences of IPV more accurately.

2.2.3 Emerging Adulthood

Unlike the mixed evidence on the effects of gender or marital status on the cycle of violence, prior literature has consistently demonstrated a significant association between age and the risk for IPV. Specifically, extant literature on the pathways from a history of childhood maltreatment to the risk for IPV has identified that age is negatively associated with the risk for IPV exposure in adulthood (Kwong et al., 2003). In other words, the risk for IPV exposure decreases with age. Although adulthood is a developmental stage in which the ages range broadly (usually considered from 18 to 65 years) most of these studies did not divide the broad age group into smaller age groups, which might contribute to the biased results. Thus, it seems essential to focus on studying adults who are at greater risk of IPV exposure, particularly emerging adulthood (ages 18-25), to understand why they are placed at higher risk for IPV.

Arnett (2000) first developed the concept of emerging adulthood and explained that emerging adulthood is a distinct developmental stage that considerably differs from adolescence and young adulthood. Arnett (2000) described emerging adulthood as a period in which individuals experience diverse and unstable life events since they continue to explore romantic relationships, career, and worldviews in this period. As emerging adults feel less responsibility for their explorations and independent decisions as compared to older adults, they are thought to be more likely to face challenges and experience failures (Arnett, 2000). Drawing on the concept of emerging adulthood, it can be proposed that emerging adults, especially those with childhood

experiences of maltreatment, may particularly have more difficulties in establishing intimate partner relationships, which subsequently increases the risk for IPV exposure.

Indeed, Black and colleagues (2009) sampled undergraduate students aged between 18 and 27 ($M_{age}=20.7$) and examined the prevalence of IPV perpetration and the pathways from childhood experiences of interparental violence to their own experiences of IPV perpetration in emerging adulthood. As expected, approximately 70% of them were found to experience psychological IPV perpetration, and the likelihood of perpetrating psychological IPV was significantly associated with age (Black et al., 2009). To better explain why the likelihood of perpetrating IPV is higher among emerging adults, it is critical for future studies to investigate more age-related factors that put the emerging adults at an elevated risk for IPV perpetration (Black et al., 2009). To assess the positive age-IPV relationship and the changing trends in experiences of IPV during emerging adulthood, one longitudinal study examined trajectories of IPV from adolescence to young adulthood (ages 13-28) (Johnson et al., 2015). Johnson and colleagues (2015) revealed that the prevalence rate of IPV perpetration was the highest during the early twenties and decreased during the late twenties (ages 25-28) for both men and women. Specifically, the prevalence was the highest (29%) at ages between 21 and 24 for women, whereas the rate was the highest (19%) at ages between 17 and 20 for men. Noticeably, overall, women's trajectory of age-IPV exposure was higher than the men's trajectory, indicating that women remain as being at greater risk for IPV perpetration during emerging adulthood, as compared to men (Johnson et al., 2014). However, as this study did not further investigate age-related factors that could better explain the dissimilar trajectories, future studies need to identify the age-related factors that might interact with gender. Also, more research examining the bidirectionality of IPV and various forms of IPV (e.g., physical

IPV, psychological IPV, etc.) should be conducted to gain a deeper understanding of the relationships between age and the trajectories of IPV.

2.3 Potential Mediators

To better understand this mechanism by which a history of childhood maltreatment is linked to an increased risk for IPV in emerging adulthood, some studies have tested the effects of potential mediators (e.g., youth violence, adolescent dating violence) on the link among emerging adults (Fang & Corso, 2007; Manchikanti Gómez, 2011). For instance, using the longitudinal data from a nationally representative sample, Fang and Corso (2007) proposed that youth violence exposure would mediate the pathway from a history of childhood maltreatment to experiences of IPV in adults aged between 18 and 26 ($M_{age}=21.7$ for women; $M_{age}=21.9$ for men). Interestingly, there were gender differences in the pathways through youth violence exposure (Fang & Corso, 2007). It is worth noting that childhood neglect had both direct and indirect effects on an increased risk for IPV perpetration among women, with a stronger direct effect. For men, the effect of childhood maltreatment (neglect, physical abuse) on the risk for IPV perpetration was significant only through youth violence. Meanwhile, experiences of childhood maltreatment had neither direct nor indirect effects on the risk for IPV victimization for women, whereas youth violence significantly mediated the effect of childhood neglect on the risk for IPV victimization for men. Given the findings that the direct and indirect pathways differ by gender and types of childhood maltreatment and IPV, identification of more gender-specific risk factors explaining the different pathways is essential to provide more effective intervention and prevention strategies according to gender. For example, for women, as childhood maltreatment itself had a stronger direct effect on

perpetration of IPV, interventions addressing both traumatic symptoms and youth violence may be more effective in preventing IPV perpetration.

In another longitudinal study, Manchikanti Gómez (2011) examined whether adolescent dating violence victimization (ages between 22 and 25 and older) would mediate the pathways. Of the total sample, the largest portion of the study sample was age 22 (40.2%), followed by age 23 (36.2%) and age 24 (18.3%). Only 5.3% of the total sample included adults aged 25 and older; as such, the majority of the participants were emerging adults. Importantly, the significant effects of a history of childhood maltreatment on IPV perpetration and victimization in emerging adulthood existed for both men and women, with a stronger effect for women. It is notable that both severe and less severe adolescent dating violence victimization significantly predicted experiences of IPV in men, even after controlling for a history of childhood maltreatment. By contrast, only severe adolescent dating violence victimization predicted experiences of IPV among women. More importantly, unlike men, a history of childhood maltreatment remained as the strongest predictor of IPV victimization among women. This evidence confirms the previous findings that childhood maltreatment is a key risk factor that perpetuates the cycle of violence, particularly for women. From the findings on the gender differences in the mediating roles of youth violence and adolescent dating violence, it can be proposed that different approaches are needed for men and women to reduce the risk for IPV. Specifically, it seems critical for men to be protected from violence exposure in youth in order to avoid becoming involved in IPV. For women, interventions targeted at addressing traumatic symptoms or screening for more salient risk markers, such as emotion dysregulation, can be more effective for reducing the risk for IPV. Thus, the current study focuses on exploring a mediating factor that particularly places women with a history of childhood maltreatment at greater risk for IPV exposure in emerging adulthood.

2.4 Pathways from a History of Childhood Maltreatment to Experiences of IPV in Adulthood through Emotion Dysregulation

A growing body of literature has increasingly shed light on emotion dysregulation as a potential mediator that links a history of childhood maltreatment to experiences of IPV in adulthood. For example, using longitudinal data, Herrenkohl et al. (2004) investigated pathways from a history of childhood physical abuse to experiences of IPV perpetration in emerging adulthood (at age 24) through emotion dysregulation, particularly negative emotionality. Surprisingly, emotion dysregulation was not found to mediate the pathways from childhood physical abuse to IPV perpetration in both genders. However, it is worth noting that a correlation between a history of childhood physical abuse and emotion dysregulation was significant for women but not for men. Similarly, a significant correlation between emotion dysregulation and perpetration of IPV existed only for women. Given that negative emotionality is significantly associated with a history of childhood physical abuse and perpetration of IPV among women, further examination of gender difference in the mechanisms linking a specific construct of emotion dysregulation to a particular type of child maltreatment and the risk of IPV is warranted.

Expanding on the previous study, Berzenski and Yates (2010) included measures of various types of child maltreatment (physical abuse, emotional abuse, sexual abuse, exposure to domestic violence) and IPV (perpetration and victimization) to explore pathways from a history of childhood maltreatment to later IPV exposure through emotion dysregulation in undergraduate students ($M_{age}=19.2$). As hypothesized, Berzenski and Yates (2010) found that childhood emotional abuse was significantly associated with emotion dysregulation and experiences of IPV. Specifically, childhood emotional abuse was the strongest predictor of both IPV perpetration and victimization, even after controlling for other types of child maltreatment. In addition, emotion dysregulation

significantly predicted both IPV perpetration and victimization, with a stronger relationship with IPV victimization. Moreover, the study revealed that the significant mediating effect of impulsivity on the pathways from childhood emotional abuse to IPV exposure emerged only for women, whereas no significant mediating effect was found for men. This evidence supports the previous findings that emotion dysregulation serves as a gender-specific risk factor placing women at greater risk for experiencing IPV in adulthood.

Similarly, another study of a large sample of undergraduate students ($M_{\text{age}}=21.2$) examined whether anger-related emotion dysregulation would mediate the pathways from a history of childhood physical abuse and witnessing interparental violence to experiences of IPV victimization (i.e., physical, psychological, and sexual IPV) in emerging adulthood (Iverson et al., 2014). As hypothesized, anger-related emotion dysregulation was found to have both direct and indirect effects on the pathways although the pathways were slightly different according to the types of childhood maltreatment and forms of IPV victimization. Notably, anger-related emotion dysregulation fully mediated the pathways from witnessing interparental violence to later physical IPV victimization, and partially mediated the effects of witnessing interparental violence on psychological IPV victimization. Interestingly, the mediating effects of anger-related dysregulation did not vary by gender, whereas Berzenski and Yates (2010) did find the gender differences in the mediating effects of impulsivity. This finding suggests that anger-related dysregulation might have a different emotion dysregulation nature from that of impulsivity. Also, the non-significant gender differences might be due to the fact that this study did not measure childhood emotional abuse, which was strongly associated with emotion dysregulation in the previous study (Berzenski & Yates, 2010). Thus, to better understand the mechanisms by which

emotion dysregulation mediates the pathways, future studies need to include measures of multiple types of child maltreatment and IPV, as well as a variety of constructs of emotion dysregulation.

Expanding on the prior literature, a more recent study examined gender differences in the pathways from a history of childhood maltreatment, including witnessing of interparental violence, to experiences of IPV through emotion dysregulation among college students ($M_{age}=19.5$) (Oliveros & Coleman, 2019). This study is notable in that it assessed who (a mother vs. a father) perpetrated interparental violence and child maltreatment to better account for the gender effects (Oliveros & Coleman, 2019). Importantly, the study revealed that there were gender differences in the pathways, and these different pathways varied as a function of types of family-of-origin violence (child maltreatment vs. witnessing interparental violence). Specifically, the pathways from witnessing interparental violence perpetrated by a father (not a mother) to experiences of IPV through emotion dysregulation were significant only for men. In contrast, for women, the pathways from childhood maltreatment to experiences of IPV through emotion dysregulation remained as significant regardless of the gender of the perpetrators, indicating that women are at greater risk for the transmission of the violence (Oliveros & Coleman, 2019).

To accurately understand the underlying mechanisms of the intergenerational transmission of violence, however, the results of these studies should be interpreted in the light of methodological limitations. First, some studies assessed only a single type of childhood abuse and a single type and form of IPV (e.g., IPV perpetration only or physical IPV only), which might not fully account for the gender difference in the pathways. Since IPV victimization has been found to be strongly associated with childhood experiences of maltreatment only for women (Whitfield et al., 2003), women might be more likely to experience IPV victimization than IPV perpetration. In this sense, if the studies included a measure of IPV victimization in the path analyses, the

mediating effect of emotion dysregulation might differ. Therefore, future studies need to measure the various types of child maltreatment and forms of IPV, as well as the bidirectionality of IPV to explain the complex relationships. In addition, as many of these studies used cross-sectional data, which have limitations in exploring developmental pathways, the temporal ordering of these observed relationships cannot be established; thus, more prospective design studies should be conducted to demonstrate the mediating role of emotion dysregulation in the long pathways and identify the trajectories of IPV in adulthood.

Despite the methodological limitations, emotion dysregulation has been consistently identified as a significant mediator. Specifically, the mediating effect of emotion dysregulation appears to vary by gender, types of childhood maltreatment, constructs of emotion dysregulation, and forms of IPV. Given that women with a history of childhood maltreatment are at high risk for experiences of emotion dysregulation and IPV, it is important for social workers to early screen for women who are at high risk. In addition, the interventions geared towards addressing emotion dysregulation can play a key role in breaking the cycle of violence, especially for the high-risk women. More importantly, social workers or CPS workers also need to assess whether adults have experienced IPV in the presence of their children. If children are identified as being exposed to interparental violence, social workers should immediately refer these children to appropriate services to assess and treat emotion dysregulation and protect them from being exposed to repeated IPV and child maltreatment.

2.5 Children's Exposure to IPV as Proxy for Child Maltreatment

In order to discontinue the intergenerational transmission of violence, it is also important to early protect children from being exposed to interparental violence, which could place the children at greater risk for being maltreated. The prior research has documented that children of parents with experiences of IPV (McGuigan & Pratt, 2001; Taylor et al., 2009) and children of parents with a history of childhood maltreatment and experiences of IPV in adulthood are at high risk for child maltreatment (Renner & Slack, 2006). Specifically, using longitudinal data, McGuigan and Pratt (2001) reported that children whose parents experienced IPV victimization during the first 6 months of the child's birth were at high risk for physical and psychological abuse, as well as neglect until the child's fifth year. Likewise, using 30-year longitudinal data from a large population-based sample of Australian mother-offspring dyads, a study found that both male and female offspring of mothers with experiences of IPV victimization were more likely to have childhood experiences of maltreatment, as compared to the offspring of mothers with no experience of IPV victimization (Ahmadabadi et al., 2018).

Meanwhile, only a few studies have examined the relationships between a parental history of childhood maltreatment, parental risk for IPV exposure, and parental risk for the perpetration of child maltreatment (Barrett, 2010; Renner & Slack, 2006). For example, using longitudinal data, one study tested whether a maternal history of childhood maltreatment would be associated with an increased maternal risk for IPV victimization and child maltreatment perpetration (Renner & Slack 2006). The study reported that while maternal experiences of almost all forms of childhood maltreatment significantly predicted an elevated risk for IPV victimization in adulthood, only childhood physical abuse predicted a heightened risk for perpetration of child maltreatment (Renner & Slack, 2006). This finding indicates that a maternal history of childhood maltreatment

is more strongly associated with maternal risk for IPV victimization, as compared to maternal risk for child maltreatment perpetration.

In another study using a community sample of mothers, Barrett (2010) examined whether maternal experiences of IPV victimization would mediate the link between a maternal history of childhood sexual abuse and maternal parenting behavior, especially maternal warmth. It is notable that Barrett (2010) further investigated whether the pathways would vary by the timing of IPV victimization (IPV victimization within a lifetime or within the past year). It is worth noting that a lifetime history of IPV victimization did not link the pathways from a maternal history of childhood sexual abuse to maternal warmth, after controlling for covariates (e.g., sociodemographic variables, other forms of childhood maltreatment). Instead, only a recent experience of IPV mediated the pathways from a maternal history of childhood sexual abuse to maternal risk for psychological aggression toward their children, even after controlling for covariates. From the findings that the pathways varied as a function of the timing of IPV, it can be argued that it is critical to early identify mothers who are at imminent risk for IPV exposure. In doing so, it is possible to prevent mothers from exposure to IPV and perpetration of child maltreatment, discontinuing the intergenerational transmission of violence.

2.6 Summary

In summary, the extant research has discovered significant pathways from a history of childhood maltreatment to later exposure to IPV in adulthood, with a greater risk in emerging adulthood (Millett et al., 2013; White & Widom, 2003; Widom et al., 2014). In particular, some studies of the intergenerational transmission of violence have further investigated whether these

pathways would differ by moderating factors (e.g., gender, marital status, etc.) or mediating factors (e.g., youth violence, dating violence, or emotion dysregulation). Importantly, emotion dysregulation has been consistently evidenced as a significant mediator that places women with a history of childhood maltreatment at greater risk for IPV exposure in adulthood although the mediating effects of emotion dysregulation were slightly different according to the types of childhood maltreatment and IPV, as well as the constructs of emotion dysregulation. In addition, since many of these studies used cross-sectional data, future studies need to use longitudinal data to contribute to a deeper understanding of the pathways. Moreover, given the strong relationships of IPV to potential for child maltreatment (Casanueva & Martin, 2007), allegations of child maltreatment (Parrish et al., 2016), and perpetration of child maltreatment (Chan et al., 2012), it is necessary to early protect women with a history of childhood maltreatment from suffering emotion dysregulation and experiencing IPV in adulthood, both of which are key risk factors for the intergenerational transmission of violence.

2.7 Theoretical Frameworks

This chapter aims to examine theories to better understand the nature of the intergenerational transmission of violence. Specifically, *attachment theory* and *social learning theory* are used to provide explanations for the mechanisms by which a history of childhood maltreatment is associated with emotion dysregulation, which in turn elevates the risk for IPV in adulthood. First, key assumptions of each theory are examined. Next, previous research on the intergenerational transmission of violence is reviewed through the theoretical lenses. Then, the applicability of theories to explaining the pathways from a history of childhood maltreatment to

the risk for IPV exposure through emotion dysregulation is critically discussed. Lastly, research questions and hypotheses are presented.

2.7.1 Attachment Theory

2.7.1.1 Development of Attachment Theory and Key Assumptions

Bowlby (1958) developed attachment theory, which proposes that children establish attachment with a secure attachment figure (usually the child's mother) in early childhood and that the established secure mother-child attachment is an integral part of children's emotional and social development, as well as of reliable interpersonal relationships throughout their lifetimes (Bowlby, 1973; Meins, 2013). In particular, Bowlby (1973) elaborates on a key concept of attachment theory—the internal working model. The internal working model is an individual's internal belief mechanism or schema that is framed according to how the individuals perceive *themselves* and *others*. Bowlby (1973) argues that a child whose mother consistently gives emotional support and meets the immediate needs of the child is likely to perceive the mother as a reliable attachment figure and to establish secure mother-child attachment styles, thereby developing a positive internal working model of caregivers. The positive internal working model of caregivers strengthens the child's healthy bio-psycho-social development (Suess et al., 1992), enables the child to have reliable relationships with others, and helps the child become a reliable caregiver.

2.7.1.2 Attachment Theory and IPV

From the attachment theoretical perspective, it is postulated that childhood experiences of maltreatment and inconsistent caregiving lead children to develop a negative internal working

model of caregivers, and this negative internal working model discourages them from perceiving significant others, including caregivers, as reliable. In a review study of an association between child maltreatment and mother-child attachment insecurity, Morton and Browne (1998) found that the majority of maltreated children were shown to have a negative internal working model of caregivers. Additionally, the maltreated children perceived a prototype of caregivers (mostly mothers) as unreliable, themselves as unworthy, and others as untrustworthy. Morton and Browne (1998) further argued that the maltreated children with insecure mother-child attachment styles would have difficulties with building reliable interpersonal relationships throughout their lifetimes and become perpetrators of child maltreatment as parents, if they were not able to be securely attached to another adult attachment figure. Thus, Morton and Browne (1998) stressed that CPS workers should put emphasis on identifying dyads of mother and child who are at risk for child maltreatment and mother-child attachment insecurity to provide them with interventions directed towards addressing insecure mother-child attachment styles.

Drawing on the adult attachment security framework, a few studies have explored whether adult attachment security would play a role in connecting the pathways from a history of childhood maltreatment to IPV exposure in adulthood (Godbout et al., 2017; Lee et al., 2014). Adult attachment, which is an extension of the mother-child attachment framework, has two main constructs: (1) Avoidant attachment; (2) Anxious attachment (Brennan et al., 1998). While avoidant attachment is attributed to feelings of discomfort with closeness and interdependence, anxious attachment represents feelings of anxiety or fear of relational abandonment (Brennan et al., 1998). One study investigated whether attachment insecurity would connect the link between a childhood history of maltreatment and experiences of IPV in emerging adulthood ($M_{\text{age}}=20.8$) (Lee et al., 2014). Importantly, the study showed that anxious attachment significantly mediated

the link between a history of childhood maltreatment and IPV perpetration only in women, whereas adult attachment insecurity did not mediate the link in men. This finding suggests that women with a history of childhood maltreatment are more vulnerable to attachment insecurity (Lee et al., 2014).

Another recent study examined the associations between childhood exposure to maltreatment, adult attachment insecurity, and relationship violence in late adolescence and emerging adulthood ($M_{\text{age}}=18.1$) (Godbout et al., 2017). In line with the previous finding on attachment anxiety, the study revealed that childhood exposure to maltreatment and interparental violence predicted only anxious attachment in adulthood, which in turn increased the risk for IPV perpetration and poorer intimate partner relationships (Godbout et al., 2017).

In particular, Smith and Stover (2016) discovered that high levels of anxious attachment predicted a higher likelihood of experiencing IPV revictimization among women with lifetime histories of multiple traumatic events. By contrast, women with low levels of anxious attachment showed a lower likelihood of experiencing IPV revictimization, despite their exposure to multiple traumatic events, suggesting that secure adult attachment can serve as a protective factor that mitigates the adverse effects of a lifetime history of trauma on experiences of IPV. From this finding, it can be possibly assumed that interventions aimed at fostering secure adult attachment styles can help reduce the risk for IPV exposure in adults, even if they experienced multiple traumatic events.

2.7.1.3 Attachment Theory, Emotion Dysregulation, and IPV

Insecure mother-child attachment styles have been identified to predict aggressive behavior and externalizing problems (Fearon et al., 2010), as well as psychological problems, including emotion dysregulation, in their lifetimes (Siegel, 2013; Spangler & Zimmerman, 2014). The insecure mother-child attachment styles have also been found to be positively associated with

emotional problems, incompetent coping skills in dealing with conflicts (Styron & Janoff-Bulman, 1997), and the risk of IPV in adulthood (Siegel, 2013).

In a review study, drawing on attachment theory, Siegel (2013) described pathways from childhood exposure to domestic violence, including witnessing parental violence, to the likelihood of IPV in adulthood through emotion dysregulation. Siegel (2013) articulated that physically or sexually abused children have impaired right brain function, which regulates affective experiences (van der Kolk, 2003), and that impaired brain function has been indicated to result in emotional outbursts or dissociation withdrawal (Schore, 2003). The processes of impaired brain function and emotion dysregulation have been identified to increase the risk for IPV exposure in adulthood, confirming the significant associations between parent-child attachment insecurity, emotion dysregulation, and IPV. Siegel (2013) emphasized the importance of the early detection of children at risk for child maltreatment and parental IPV in order to prevent them from developing insecure parent-child attachment, a negative internal working model, and emotion dysregulation. As for interventions, these at-risk dyads of parent and child need to participate in programs to learn skills for emotion regulation in order to foster parent-child attachment security. Also, it is imperative for the couples experiencing IPV to receive interventions targeting anxious attachment to lower the risk for emotion dysregulation and revictimization of IPV.

2.7.1.4 A Critical Review of Attachment Theory

Although attachment theory has been identified as applicable to explaining the relationships between a history of childhood maltreatment, insecure parent-child attachment, and emotion dysregulation, a few limitations of attachment theory should be taken into consideration. Bowlby's attachment theory posits that children's parent-child attachment styles in early childhood determine their adult life; as such, it does not perceive individuals as active agents who have the

potential to break the intergenerational transmission of violence. In other words, Bowlby's attachment theory does not appear to focus on protective factors (e.g., adulthood attachment security) that serve to discontinue the vicious cycle of violence. Moreover, although attachment theorists assert that another secure attachment figure, such as a foster parent, can help maltreated children break the vicious cycle, this argument does not seem to be applicable to children in group care who might have difficulties in finding an adult attachment figure. Thus, future attachment theorists should put more efforts into exploring protective factors that can compensate for the absence of a secure attachment figure in order to challenge the deterministic view. Furthermore, attachment theorists have primarily adopted approaches to changing the individual's perception or internal working models. For example, psychotherapy and cognitive therapy have been provided to alter the maltreated children's negative internal working models to positive ones. However, as mentioned earlier, the intergenerational transmission of violence would not persist if adult survivors of child maltreatment were securely attached to their intimate partners (Smith & Stover, 2016) or received social support from multiple systems (e.g., neighbors) (Tracy et al., 2018). Thus, adult survivors of child maltreatment should receive interventions focused not only on mitigating anxious attachment, but also on learning emotion regulatory skills to enhance reliable intimate partner relationships and social support from others. Both individual-level and context-level (e.g., neighbors) approaches will contribute to breaking the cycle of violence.

2.7.2 Social Learning Theory

2.7.2.1 Development of Social Learning Theory and Key Assumptions

Bandura (2007) developed *social learning theory* (SLT), which posits that an individual's behavior is conducted not only through observations of the behavior but also through cognitive

processes. SLT posits that the individual is able to perceive whether the behavior accompanies rewards or punishment and to decide which behavior to model (Bandura, 2007). Importantly, SLT assumes that the observer decides which behavior to model according to the reliability of the relationships between the observer and the observer's model as well as how often the observer experiences the observational learning process. In this sense, it is possible that mothers who shape their children's observational learning and modeling process can be a significant model, since children spend the most time with their mothers. Thus, mothers should be alert to the possibility that their children may learn aggressive or violent behavior from them. Additionally, Bandura and Walters (1959) developed the same-sex model, which proposes that an observer is more likely to model and imitate behavior of a model who has the same sex rather than a model who has the opposite sex. Indeed, one study tested the same sex model and found that paternal harsh parenting was a stronger predictor of a son's aggressive behavior, compared to a daughter's (Chang et al., 2003). Based on the assumptions, it is possible to assume that the same-sex model can also be used to explain the gender differences in the pathways from a history of childhood maltreatment to experiences of IPV in adulthood.

2.7.2.2 Social Learning Theory and IPV

IPV researchers have adopted SLT to explain the pathways from a history of childhood maltreatment to IPV exposure in adulthood (Cannon et al., 2009; Stith et al., 2000). Driven by SLT, Stith et al. (2000) reviewed prior literature and found that adult survivors of child maltreatment who observed and learned violence from their family of origin were likely to experience IPV perpetration and victimization in adulthood. In addition, based on the same-sex model, some studies have explored whether modeling violent behavior would differ by the gender of the adult child and the gender of the parent who maltreated the child (Gover et al., 2008;

Jankowski et al., 1999; Oliveros & Coleman, 2019). For example, one study discovered that a significant mediating effect of emotion dysregulation on the link between witnessing father-to-mother violence in childhood and IPV exposure in adulthood was found for men (Oliveros & Coleman, 2019). In contrast, witnessing mother-to-father violence was not linked to experiences of IPV in adulthood, supporting the same-sex model (Oliveros & Coleman, 2019). Similarly, another study showed that women witnessing father-to-mother violence in childhood had a higher likelihood of being a victim of physical dating violence in adulthood, suggesting that women are likely to perceive women as a victim of violence (Gover et al., 2008).

2.7.2.3 A Critical Review of Social Learning Theory

SLT also has a deterministic viewpoint that one's behavior is driven by one's observations and cognitive processes. Since SLT posits that an individual's involvement in violence, particularly IPV, is attributed to the individual's self-determination about engagement in the modeling and cognitive process, perpetration of IPV is thought of as a result of the individual's decision. However, it is important to note that not all individuals exposed to child maltreatment in childhood necessarily learn and model the aggressive behavior and perpetrate violence. In other words, there are multiple socio-cultural risk factors that place the adult survivors of child maltreatment at a heightened risk for being involved in IPV. The socio-cultural risk factors could be low socioeconomic status, racial/ethnic minority identities, a lack of support from neighbors, patriarchal social structures, etc. Thus, it is imperative for social workers to acknowledge that not only the individual-level's risk factors, but also multiple socio-cultural risk factors play roles in accounting for the intergenerational transmission of violence. In this regard, social workers should identify risk factors at multiple levels that might confound the effect of a history of childhood maltreatment on experiencing IPV in adulthood. In addition, interventions focused on addressing

these socio-cultural risk factors should be provided to the adult survivors of child maltreatment in order to break the cycle of violence.

2.7.3 A Synthesis of Theories

In the current study, *attachment theory* and *SLT theory* have been applied to explaining the underlying mechanisms of the intergenerational transmission of violence. Specifically, attachment theory was employed to explain how maltreated children with insecure parent-child attachment styles develop emotion dysregulation and adult attachment insecurity, which are significant predictors of IPV exposure in adulthood. In particular, attachment theory was also used to describe the process by which maltreated children's lack of interactions with caregivers increase the risk for emotion dysregulation and experiences of IPV in adulthood. Although attachment theory has a deterministic viewpoint that insecure parent-child attachment in early childhood determines the children's adult lives, recent research on attachment theory has increasingly evidenced that adult attachment security can serve as a protective factor that reduces the risk for IPV (Smith & Stover, 2016). Thus, more identification of adult attachment security as a protective factor can possibly challenge the deterministic view of the intergenerational transmission of violence.

Meanwhile, SLT is applicable to understanding the modeling process by which children learn and model the aggressive behavior from their maltreating parents and grow up to be involved in IPV in adulthood. SLT is also deterministic in that it assumes that maltreated children are likely to model violent behavior learned from maltreating parents through self-determination, despite the fact that not all maltreated children grow up to be involved in violence. Since intergenerational transmission of violence is a complex process in which both the individual's self-determination on modeling behavior and multiple socio-cultural risk factors play roles in elevating the risk for IPV,

it is important not to blame one's modeling process; instead, risk factors at multiple levels should be taken into account. Given the complex nature of the intergeneration transmission of violence, future theorists should design qualitative studies to gain a deeper understanding of the complex mechanisms by which these significant multiple risk factors interplay. This can lead to the development of an integrative theoretical framework.

2.8 Clinical and Policy Interventions

This chapter aims to investigate existing clinical and policy interventions that can be potentially used to address emotion dysregulation and reduce the risk of IPV, discontinuing the intergenerational transmission of violence. As a clinical intervention, Dialectical Behavior Therapy and Emotionally Focused Therapy are examined. In addition, policy interventions designed and implemented for children and families who are at risk for the co-occurrence of IPV and child maltreatment are evaluated and discussed. Each intervention will be comprehensively examined in the following sections.

2.8.1 Clinical Interventions

2.8.1.1 Dialectical Behavioral Therapy

In the previous studies, a significant pathway from a history of childhood maltreatment to experiences of IPV in adulthood has been demonstrated. In particular, emotion dysregulation has been identified to significantly mediate this pathway. Thus, it is possible to argue that treatment of emotion dysregulation could play a significant role in discontinuing the intergenerational

transmission of violence. As a treatment of emotion dysregulation, Dialectical Behavior Therapy (DBT; Linehan, 1993) was originally developed to alleviate emotion dysregulation in chronically suicidal patients with self-harm behavior, borderline personality disorder (BPD), and other psychological problems. DBT aims to develop physiological, cognitive, and behavioral management strategies, all of which can guide participants to recognize and accept a wide array of emotions, especially negative emotions, as well as cope with the negative emotions and distress without severe emotional arousal (Cloitre et al., 2006). Standard DBT includes four modules: 1) mindfulness; 2) interpersonal effectiveness; 3) emotion regulation; 4) distress tolerance. Standard DBT is implemented over six months, and the 6-month cycle can be repeated (Linehan, 2014).

Past research has documented that DBT is effective for mitigating emotion dysregulation in BPD patients (Axelrod et al., 2011; Goodman et al., 2014; Linehan, 2014) and building reliable interpersonal relationships (Dimeff & Linehan, 2001). For instance, Lenz and colleagues (2016) showed that DBT was effective for regulating a range of emotions and establishing reliable peer relationships among adolescents with mood disorders. Given that most BPD patients were shown to have a history of childhood maltreatment (Driessen et al., 2000; Schmahl et al., 2003, Teicher et al., 2003), it is possible that DBT can also be effective in regulating emotions among populations with a history of childhood maltreatment.

To demonstrate its effectiveness, Bohus et al. (2013) examined whether DBT-PTSD, which was tailored for PTSD patients, would improve emotion dysregulation among female PTSD patients with a history of childhood sexual abuse (CSA) in a residential treatment program. In a randomized controlled trial (RCT), while female patients with CSA-related PTSD had significant improvements in PTSD symptoms, social functioning, and depression, they did not show statistically significant reductions in emotion dysregulation symptoms (Bohus et al., 2013).

However, it should be noted that since this study collected data from participants in a residential treatment program, the participants might suffer from clinically severe emotion dysregulation symptoms, which might compromise the effectiveness of DBT on emotion dysregulation. According to the results, DBT-PTSD appears to be more effective for alleviating PTSD symptoms; as such, DBT-PTSD may need to be combined with another intervention (e.g., Emotionally Focused Therapy), which focuses on addressing emotion dysregulation symptoms.

To reduce risk for IPV, DBT was also adapted to treat couples with IPV. The modified DBT, which includes additional skills for recovery from IPV, has also been tested for its effectiveness (Iverson et al., 2009). Specifically, for IPV perpetrators, the modified DBT aims to regulate the batterers' negative emotions to reduce their risk for emotional arousal and IPV perpetration. In contrast, for victims of IPV, the modified DBT focuses more on helping the victims be aware of their emotions as well as emotional cues from their abusive partners in order to detect signs of IPV and avoid IPV. In a study examining the applicability of DBT to partner abuse men, Waltz (2003) reported that the modified DBT improved interpersonal skills and intimate partner relationships among partner abuse men, including those who had BPD symptoms.

Similarly, in a controlled experimental design study of DBT for perpetrators of IPV, Havenhill (2011) found that the DBT group showed similar decreases in physical and psychological aggression, as well as in aggressive behavior versus a treatment-as-usual group (TAU) did. In another study by Iverson et al. (2009), female victims of IPV who received a 12-week group DBT showed significant improvements in depression, emotional disturbances, suicidal risk, and social skills (e.g., marital relationships and parent-child relationships), with moderate to large effect sizes. However, since this study neither had a control group nor collected follow-up data, it should be cautioned against making causal inferences about the significant treatment

effects. Also, the majority of participants (97%) in this study are low-income and Caucasian women; as such, further studies need to include more diverse racial/ethnic groups of female victims to generalize the results. Moreover, this study included female victims who experienced IPV at some points in their lifetimes. Since female victims with a recent experience of IPV could have more severe emotion dysregulation compared to the female victims who experienced IPV several years ago, future research needs to assess when the first event of IPV occurred.

2.8.1.2 Emotionally Focused Therapy for Couples

Driven by attachment theory, Emotionally Focused Therapy for couples (EFT; Greenberg & Johnson, 1988) aims to improve emotional accessibility and responsiveness to partners, as well as promote secure romantic attachment styles. It is worth noting that EFT researchers have been developing EFT to treat a variety of couples who have a history of childhood maltreatment or who are underrepresented groups (Furrow et al., 2011). In EFT, therapists view couples' relationship distress through the lens of attachment theory and focus on identifying emotions underlying couples' interactions and attachment styles. Couples participating in EFT are encouraged to understand and respond to each partner's emotions and needs in order to address their relationship distress and establish secure attachment.

Given that the previous findings have identified a history of childhood maltreatment as a significant predictor of IPV in adulthood, it is important to test whether the use of EFT with couples where at least one partner has a history of childhood maltreatment would reduce the risk of IPV. One thematic study by MacIntosh and Johnson (2008) collected a community sample of 10 distressed couples in which only one partner had a history of childhood sexual abuse (CSA) to test the effectiveness of EFT for treating the couples' relationship distress and the CSA survivors' trauma symptoms. The study provided these couples with a 19-session EFT and assessed clinical

improvements in the relationship satisfaction and trauma symptoms. Results of the study indicated that half of the couples reported significant improvements in relationship satisfaction, and half of the CSA survivors showed significant reductions in general trauma symptoms. Notably, all of the CSA survivors displayed clinically significant improvements in diagnostic PTSD symptoms, indicating that EFT effectively treated PTSD symptoms. However, results of the thematic analysis revealed that the CSA survivors commonly reported challenges, such as feeling shame, self-blaming, anger-related emotion dysregulation, and unreliable relationships while engaging in EFT.

In addition, Dalton et al. (2013) conducted an RCT to examine the effectiveness of EFT for reducing relationship distress and the female partners' trauma symptoms among couples where only female partners have a history of childhood maltreatment in their family of origin. In the study, a treatment group of couples, who participated in a 24-week EFT, reported clinically significant improvements in relationship distress at the post-test compared to a waitlist control group. However, the female partners did not display a significant reduction in trauma symptoms at the post-test, suggesting that the couple-focused EFT might not uniquely contribute to mitigating the female partner's trauma symptoms. Thus, the female survivors of childhood maltreatment may need to receive additional interventions to alleviate both traumatic symptoms and emotion dysregulation. Nonetheless, given the findings on the effectiveness of EFT for improving relationship distress, it is possible to assert that EFT can play a role in reducing the risk for IPV among couples with a history of childhood maltreatment.

Moreover, another study has discussed the application of EFT to couples with diverse cultural backgrounds and sexual orientation identities (Furrow et al., 2011). Specifically, given the high prevalence of a history of childhood maltreatment, emotion dysregulation, and experiences of IPV in adulthood among same-sex couples (Charak et al., 2019), it seems critical to provide

same-sex couples with EFT. For example, a qualitative study reported that EFT was effective for enhancing same-sex couples' attachment security, which plays a key role in buffering against challenges facing the same-sex couples, such as social stigma in a heterosexist society (Josephson, 2003). Although the previous studies have examined the applicability of EFT to couples from underrepresented groups (Hardtke et al., 2010; Josephson, 2003), no empirical research has evaluated the effectiveness of EFT with same-sex couples. Thus, it is important to conduct more empirical research examining the effectiveness of EFT for preventing IPV among couples, especially those from underrepresented groups.

2.8.2 Policy Interventions

Although there are some clinical interventions aimed at reducing the risk for emotion dysregulation and IPV, policy interventions for children and families who are at high risk for exposure to IPV are limited. However, as more attention has been paid to the high prevalence of the co-occurrence of child maltreatment and domestic violence, the issue of IPV has been increasingly examined and addressed in the context of child maltreatment. In 1974, a federal law, the Child Abuse Prevention and Treatment Act (CAPTA), was first enacted to provide legal definitions of child abuse and neglect and discretionary grant funds to states to support prevention, assessment, investigation, and treatment for child abuse and neglect. Providing a minimum set of definitions, CAPTA defines child maltreatment as “any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act which presents an imminent risk of serious harm.” Under CAPTA, each state has its own rights to legally define child maltreatment, resulting in the variation in legal definitions of child maltreatment across states.

Due to the definitional discrepancy, only 24 states and Puerto Rico define children's witnessing IPV as a form of child maltreatment, whereas other states do not (U.S. DHHS, 2016). For example, Florida defines children's exposure to domestic violence as a type of physical abuse; Montana specifies it as a type of emotional abuse; Utah defines domestic violence as child abuse only when it occurs in the presence of a child; and Massachusetts defines domestic violence as physical abuse only when it causes bodily injury or fear of imminent bodily injury (Ch.119, §51A). The definitional discrepancy leaves states and CPS workers to make their own decisions on investigation and treatment for child maltreatment and domestic violence.

Despite the varying definitions of children's exposure to domestic violence as child maltreatment across states, the CAPTA Reauthorization Act of 2010 (P.L. 111-320) legally defines children's exposures to drug-related activity and domestic violence, as well as prenatal substance exposure, as child maltreatment. In addition, the CAPTA Reauthorization of 2010 (P.L. 111-320) mandates the U.S. Department of Health and Human Services (HHS) to provide service providers with information, training, and technical assistance that help them assess and identify the risk for the co-occurrence of child maltreatment and domestic violence. In addition, grants are awarded to conduct research on effective programs for interagency collaboration between CPS and domestic violence agencies. As a result, in December 2000 and January 2001, the Greenbook Initiative, a five-year federal-level program, was implemented in six communities (El Paso County in Colorado, Grafton in New Hampshire, Lane County in Oregon, St. Louis County in Missouri, Santa Clara in California, and San Francisco County in California) as demonstration sites for interagency collaborations between child welfare and domestic violence service entities, as well as family courts in order to treat and prevent the co-occurrence of child maltreatment and domestic violence (Edleson & Malik, 2008). The National Council of Juvenile and Family Court Judges

(NCJFCJ) published a book, *Effective Intervention in Domestic Violence and Child Maltreatment Cases: Guidelines for Policy and Practice*, called the Greenbook. The Greenbook guided child welfare and domestic violence agencies, as well as family courts to develop service plans and implement the collaborative interventions. Under this guidance, each demonstration site received about \$350,000 for five years to implement effective programs to address the co-occurrence of child maltreatment and domestic violence.

Specifically, leaders from each sector (child welfare agencies, domestic violence agencies, and family courts) regularly met to discuss the issue of the co-occurrence of child maltreatment and domestic violence and developed implementation plans (e.g., safety planning, case management, advocacy, technical assistance for sharing information between agencies). They also presented proposals of new public policies, refined the existing policies, and used media to raise awareness in policymakers, funders, and the general public regarding the issue of the co-occurrence of child maltreatment and domestic violence. Moreover, staff from the three sectors participated in training sessions to learn about how to early detect the risk for the co-occurrence of child maltreatment and domestic violence and how to better engage in the collaboration.

The Greenbook National Evaluation Team collected data from each sector over the three periods—initial (2001), interim (2003), and final (2005)—and evaluated the process and outcomes of five key activities, which are collaboration, screening and assessment, safety, advocacy for child and adult victims, and batterer accountability. According to the final evaluation report (2008), stakeholders perceived the Greenbook Initiative as effective for better identifying and assessing the issue of the co-occurrence of child maltreatment and domestic violence. On the other hand, direct service workers in both child welfare and domestic violence service agencies did not view the initiative as effective (Greenbook National Evaluation Team, 2008). Specifically, child welfare

service workers reported that the training session did not help them apply learned knowledge and skills to early detect the risk for IPV and immediately offer the victims of IPV referral services, such as advocacy, legal, and community services. Moreover, judges and stakeholders in family courts reported that there were no improvements in gaining knowledge of the issue of the co-occurrence of child maltreatment and domestic violence nor in sharing information and communicating with child welfare and domestic violence agencies.

The Greenbook Initiative National Evaluation Team assumed that difficulties with detection and assessment of risk for IPV in the context of child maltreatment might be due, in part, to the inconsistency in legal definitions of children's exposure to domestic violence as a form of child maltreatment and to the child welfare workers' lack of knowledge to identify and evidence potential harm to the children who witness or hear of an act of domestic violence. Although the findings on self-reports about the process and outcomes of the initiative were mixed, case file reviews evidenced the initiative as effective in decreasing incidents of the co-occurrence of child maltreatment and domestic violence. Specifically, the incidence rate of domestic violence within 1 year of child maltreatment significantly decreased from 2001 to 2005. Also, the number of adults experiencing both domestic violence victimization and perpetration of child maltreatment significantly reduced from 2003 to 2005. Significant reductions in the co-occurrence of child maltreatment and domestic violence were found between 2001 and 2005 and between 2003 and 2005, demonstrating the effectiveness of the initiative.

2.9 Gaps in the Existing Literature

As shown in the previous empirical and theoretical studies, it appears that the pathways from a history of childhood maltreatment to IPV exposure later in life are complex. In other words, there are specific risk factors that significantly elevate the risk for IPV exposure later in life, perpetuating the intergenerational transmission of violence. Although the complex mechanisms by which multiple risk factors mediate the pathways from a history of childhood maltreatment to the risk for IPV in adulthood have been widely investigated in cross-sectional studies, little is known about whether emotion dysregulation would significantly play a role in mediating the effects of a history of childhood maltreatment on the trajectories of IPV perpetration and victimization in emerging adulthood. To fill the research gap, the current study used longitudinal data to identify the growth trajectories of experiences of IPV in adult survivors of child maltreatment. In addition, the current study sought to examine direct effects of a history of childhood maltreatment on later experiences of IPV over time and to test whether these effects would be mediated by emotion dysregulation. Figure 1 presents a conceptual model for the current study. The model shows the pathways from a history of childhood maltreatment to the risk for IPV through emotion dysregulation in emerging adulthood.

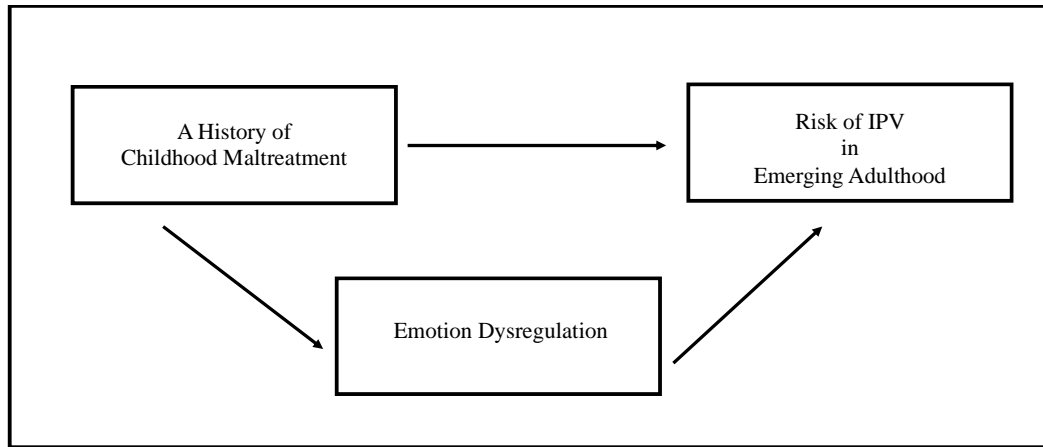


Figure 1 The Pathways from a History of Childhood Maltreatment to the Risk of IPV through Emotion Dysregulation in Emerging Adulthood

2.10 Research Questions and Hypotheses

Q1. What are the patterns of growth trajectories of IPV perpetration and victimization over the course of years?

H1a: The risk of IPV perpetration and victimization would increase from ages 19 to 22.

H1b: The mean initial levels and overall rates of changes in the risk of IPV perpetration and victimization would be significant from ages 19 to 22.

Q2: Is a history of childhood maltreatment associated with the initial level and the rate of change in the risk of IPV perpetration while covariates are taken into account?

H2a: Women who experienced corporal punishment in childhood would show a higher initial level and a faster rate of change in the risk for IPV perpetration over time, as compared to those without childhood experiences of corporal punishment.

H2b: Women who experienced emotional abuse in childhood would show a higher initial level and a faster rate of change in the risk for IPV perpetration over time, as compared to those without childhood experiences of emotional abuse.

Q3: Is a history of childhood maltreatment associated with the initial level and the rate of change in the risk of IPV victimization while covariates are taken into account?

H3a: Women who experienced corporal punishment in childhood would show a higher initial level and a faster rate of change in the risk for IPV victimization over time, as compared to those without childhood experiences of corporal punishment.

H3b: Women who experienced emotional abuse in childhood would show a higher initial level and a faster rate of change in the risk for IPV victimization over time, as compared to those without childhood experiences of emotional abuse.

Q4: Does emotion dysregulation mediate the effects of a history of childhood emotional abuse on the initial levels and the rate of change in the risk for IPV perpetration and victimization?

H4a: Emotion dysregulation would significantly mediate the effects of a history of childhood emotional abuse on the initial level and the rate of change in the risk for IPV perpetration.

H4b: Emotion dysregulation would significantly mediate the effects of a history of childhood emotional abuse on the initial level and the rate of change in the risk for IPV victimization.

3.0 Methodology

3.1 Data Source

The current study used secondary data drawn from the Pittsburgh Girls' Study¹ (PGS), which is a longitudinal survey of an urban community sample of girls. In the longitudinal study, the total sample ($N=2,450$) included four age-based cohorts of girls aged five ($n=588$), six ($n=630$), seven ($n=611$), and eight ($n=621$). In 1999, the PGS has started to interview these four age-based cohorts of girls to examine their developmental trajectories from childhood to adulthood. Young women aged between 26 and 29 years have been currently participating in the 22nd wave of the study. Specifically, diverse domains of development (e.g., mental health, behavior problems, etc.) have been assessed by multiple informants, i.e., child (from ages of 6), primary caregiver, trained interviewer, and teacher (Keenan et al., 2010). The current study used data of a primary caregiver's self-reports of child maltreatment perpetration at Wave 4, and the adult child's self-reports of emotion dysregulation at Wave 14 (aged 18 years) and of IPV exposure from Waves 15 to 18 (between the ages of 19 and 22 years). The retention rates have been high ranging from 97.2% at Wave 2 to 86% at the most recent Wave.

¹ Note. <http://www.lifehistorystudies.pitt.edu/pittsburgh-girls-study> for more information about the Pittsburgh Girls' Study.

3.2 Sample

The total sample of girls has been recruited and annually interviewed by trained interviewers in the participants' homes. Using a stratified and random sampling method, the PGS oversampled low-income households, with a quarter of the families living at or below the poverty level (Keenan et al., 2010). Of the total sample of girls, 52% were African Americans, 41% were European American, and others were identified as multiracial or representing other races (Keenan et al., 2010). In the first wave of the PGS, the vast majority of primary caregivers (92%) were biological mothers (Keenan et al., 2010). In the current study, a final sample excluded women who had missing data on IPV experiences. Thus, the final analytic sample consisted of 1,928 women between the ages of 19 and 22 years.

3.3 Variables and Measures

3.3.1 Dependent Variables

3.3.1.1 Experiences of Intimate Partner Violence (IPV)

Experiences of IPV were measured using the *Revised Conflict Tactics Scale-2* (CTS-2; Straus et al., 1996). The CTS-2 has been widely employed to assess both perpetration and victimization of multiple forms of IPV (e.g., physical assault, psychological aggression, injury, sexual coercion, etc.). The current study used six indicators drawn from the physical assault subscale, which includes items asking about perpetration and victimization through physical violence (e.g., "I threw something at my partner."). In addition, the psychological aggression

subscale includes 16 items assessing verbal aggression, which psychologically harms a partner (e.g., “I insulted or swore at my partner.”), or statements of intentions to inflict harm (e.g., “I threatened to hit or throw something at my partner.”). The injury subscale has 12 items and measures physical injury that may require medical treatment (e.g., “I went to a doctor because of a fight with my partner.”). The CTS-2 consists of pairs of items in order to measure the bidirectionality of IPV. Specifically, the respondent was asked to report the frequency of the respondent’s behavior toward the partner (e.g., “I pushed, grabbed, or shoved my partner.”) and then rate the frequency of the partner’s behavior toward the respondent (e.g., “My partner did this to me.”). Items were scored on a 7-point scale ranging from 0 (*never*) to 6 (*more than 20 times*). For the purposes of the study, the physical assault, the psychological aggression, and the injury subscales were used to assess experiences of IPV. A total score of IPV perpetration was summed for the items asking about the respondent’s perpetration of IPV. Similarly, a total score of IPV victimization was summed for items measuring IPV perpetration by the respondent’s partner. Straus et al. (1996) indicated that the CTS-2 had good internal consistency among undergraduate students, ranging from 0.79 to 0.95 ($\alpha=0.86$ for the physical aggression subscale; $\alpha=0.79$ for the psychological aggression subscale). High internal consistency was demonstrated ($\alpha=0.90-0.92$ for the verbal aggression subscale; $\alpha=0.82-0.86$ for the physical aggression subscale) in a study using the adolescent samples of the PGS (Lazarus et al., 2019).

3.3.2 Independent Variables

3.3.2.1 A History of Childhood Maltreatment

For the purposes of the current study, a history of childhood maltreatment was measured using a primary caregiver’s self-reports of child maltreatment perpetration when the girls were

aged 8. *The Conflict Tactics Scale-Parent/Child version* (CTS-PC; Straus et al., 1998), which is a 22-item self-report measure, was used to assess the frequency of four types of child maltreatment. In the PGS, three subscales of the CTS-PC were used to measure parent-reported child maltreatment: (1) Non-violent discipline; (2) Psychological aggression/emotional abuse; (3) Corporal punishment/physical abuse. For the purposes of the current study, indicators drawn from the psychological aggression and corporal punishment subscales were used to measure a history of childhood emotional abuse and corporal punishment. The psychological aggression subscale consists of five items (e.g., “Swore or cursed at him/her”, “Shouted, yelled, or screamed at him/her”). The PGS used one indicator to assess corporal punishment (e.g., “Spanked or hit her”). Responses were scored on a 3-point scale (1=*never*; 2=*sometimes*; 3=*often*) with higher scores reflecting frequent experiences of child abuse. Internal consistency of the CTS-PC subscales ranged from 0.22 to 0.70 ($\alpha=0.55$ for the overall corporal punishment subscale; $\alpha=0.60$ for the psychological aggression subscale) (Straus et al., 1998).

3.3.3 Mediator

3.3.3.1 Emotion Dysregulation

Emotion dysregulation has been widely identified as a central aspect of BPD symptoms (Glenn & Klonsky, 2009; Linehan, 1993); it serves a role in maintaining the BPD symptoms (Stepp et al., 2014). Emotion dysregulation was measured at age 18 using a screening questionnaire of the *International Personality Disorders Examination* (IPDE-BOR; Loranger et al., 1994), which is based on The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994) criteria for BPD. The IPDE-BOR includes 9 dichotomous items assessing BPD symptoms (e.g., “When I am under stress, things around me

don't seem real.", "I have tantrums or angry outbursts.", "I'm very moody."). *True* was coded 1, and *false* was coded 0. The total score ranged from 0 to 9, with higher scores indicating severe BPD symptoms. It has been suggested that a score of 4.0 is a clinical cut-off point for a BPD diagnosis (Smith et al., 2005). Adequate convergent validity ($r = .71, p < .001$) was demonstrated for the IPDE-BOR in a study using a subsample of the PGS, in which the Structured Clinical Interview for DSM-IV Personality Disorders was administered to measure BPD symptoms (Pfohl et al., 1997). The overall internal consistency for the IPDE-BOR was acceptable, ranging from 0.70 to 0.76 in the previous studies with the PGS (Kaufman et al., 2020; Lazarus et al., 2018).

3.3.4 Covariates

3.3.4.1 Mental Health Problems

To better identify the mediating role of emotion dysregulation, other mental health problems or disorders assessed at age 18 were added to the analyses as covariates to control for symptoms of other mental health problems. Mental health problems included depressive symptoms and anxiety. *The Adult Self-Report Inventory-4* (ASRI; Gadow et al., 2004) was used to measure symptoms of depression and anxiety. Twelve items assessed depressive symptoms (e.g., "Felt depressed or very sad", "Felt bad that you could not do things as well as other people"), and eight items evaluated symptoms of anxiety (e.g., "Had trouble getting yourself to stop worrying", "Felt nervous and on edge"). The items were rated on a 4-point scale ranging from 0 (*never*) to 3 (*all the time*), with higher scores reflecting severe symptoms of depression and anxiety. The ASRI demonstrated adequate concurrent validity, sensitivity, and specificity (Gadow & Sprafkin, 1998) and high internal consistency, ranging from 0.79 to 0.86, in a study using a sample of young adults from the PGS (Conway et al., 2017).

3.3.4.2 Sociodemographic Characteristics

The respondents were asked to identify *race* (Caucasian; African American; Asian; Multi-racial) at Wave 1. The race variable was dichotomized (0= *all other races*; 1= *Caucasian*).

3.3.4.3 Neighborhood Risk

Neighborhood risk was assessed at age 18 using a 17-item self-report measure, *Your Neighborhood* (YN; Loeber et al., 1998). A list of problems that occur in neighborhoods was provided to the respondents to evaluate their perceptions of the problem (e.g., vandalism, abandoned houses, thefts, gambling, etc.). The items were rated on a 3-point scale ranging from 1 (*not a problem*) to 3 (*a big problem*), with higher scores reflecting greater neighborhood risk. High internal consistency ($\alpha=0.94-0.95$) was demonstrated for the YN measure (Sartor et al., 2018).

3.4 Data Analysis Plan

3.4.1 Univariate and Bivariate Analyses

All univariate analyses and bivariate analyses were executed using STATA 16.1 (StataCorp, 2019). Preliminary analyses were conducted to examine descriptive statistics of the study variables and sociodemographic characteristics of the study sample. Bivariate analyses were performed to identify correlations between the study variables. Specifically, Spearman's Rank Correlation Coefficient and Wilcoxon Rank-Sum test were used to examine correlations among the key study variables.

3.4.2 Latent Growth Curve Modeling

Latent growth curve modeling (LGCM) was used to test the research hypotheses of the current study. Models were estimated with R 4.0.0 (R Core Team, 2020) using the lavaan package (Rosseel, 2012). LGCM has been widely employed to estimate between-person differences in within-person patterns of change over time (Curran et al., 2010). In addition, LGCM is flexible in that it can be applied to the longitudinal data analyses, in which there are missing data (missing completely at random or missing at random), unequally spaced time points, non-normally distributed measures, and complex functional forms of trajectories, etc. (Curran et al., 2010). Moreover, LGCM is useful for identifying the mean trajectories for the total sample and the variance of individual trajectories around the group mean trajectories as well as testing the effects of predictors on the latent growth factors (i.e., intercepts and slopes) over time (Curran et al., 2004). Considering these benefits, the current study performed LGCM since the primary aims of the study were to identify the long-term effects of a history of childhood maltreatment on the developmental trajectories of experiences of IPV through emotion dysregulation in emerging adulthood (aged from 19 to 22 years) and examine whether the growth trajectories of IPV would differ by the types of childhood maltreatment. First, a series of unconditional LGCM (see Figure 2) was performed to estimate the initial levels (intercepts) and rates of changes (slopes) of IPV perpetration and victimization and assess the individual variability in the initial levels and the rates of changes over time. The optimal growth function over time was identified by the estimation of the unconditional LGCMs.

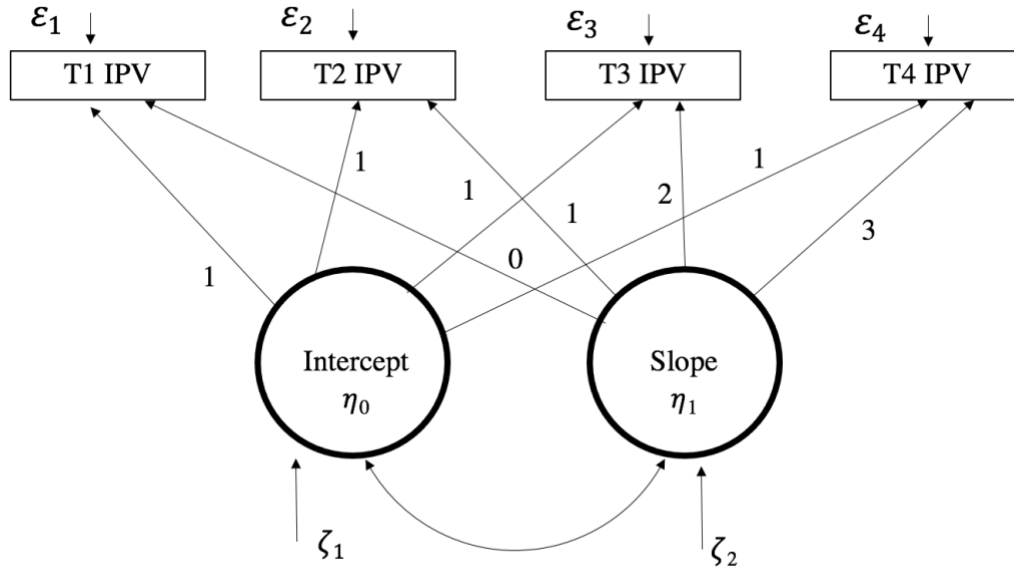


Figure 2 Unconditional Latent Growth Curve Model for IPV Risk

Then, conditional LGCM with predictors were conducted to test whether a history of childhood maltreatment would significantly account for the growth trajectories of IPV perpetration and victimization in emerging adulthood, respectively (see Figure 3). The predictors (types of childhood maltreatment) and covariates (mental health problems, sociodemographic information, and neighborhood risk) were included in the conditional LGCMs to test the direct effects of a history of childhood maltreatment on experiences of IPV perpetration and victimization. Lastly, the mediating roles of emotion dysregulation in the effects of a history of childhood maltreatment on the growth trajectories of IPV perpetration and victimization were tested (see Figure 4).

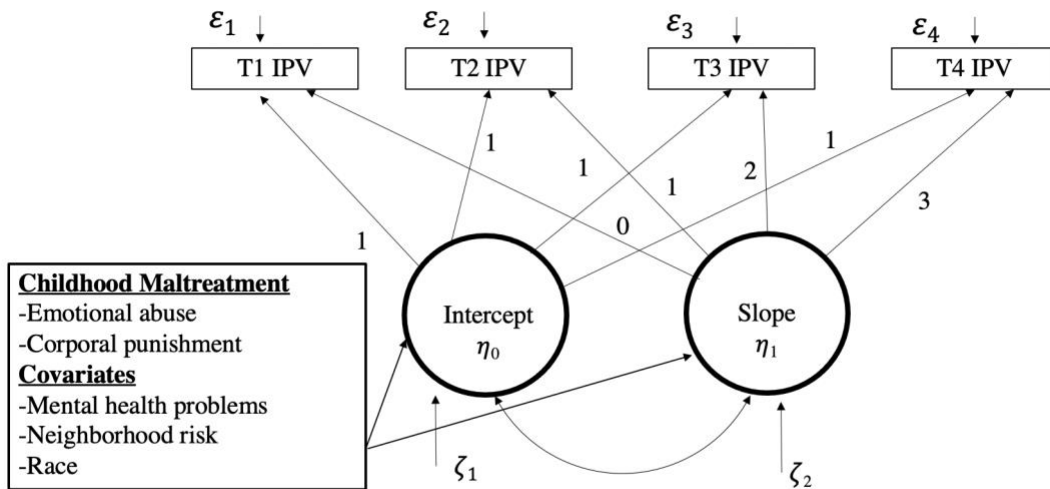


Figure 3 Conditional Latent Growth Curve Model Estimating Growth Trajectories of IPV Risk

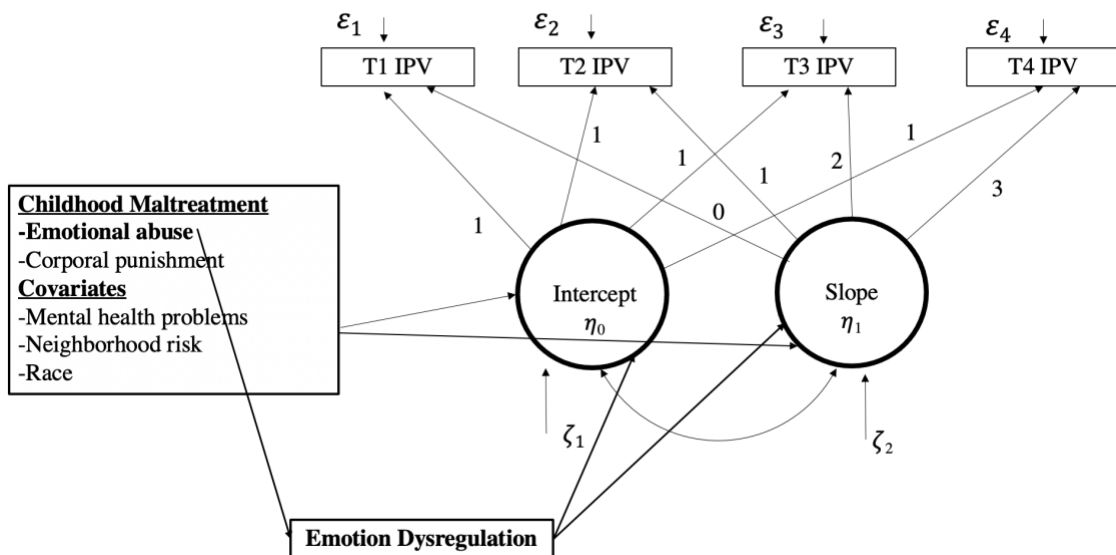


Figure 4 A Path Diagram of the Mediation Model Estimating the Effects of a History of Childhood Maltreatment on the Growth Trajectories of IPV Risk through Emotion Dysregulation

3.4.3 Model Fit

Model fit was evaluated by examining fit indices, which include the χ^2 goodness-of-fit test, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). The conventional cut-off values ≥ 0.95 are good fit for TLI. For RMSEA, values <0.08 indicate acceptable fit, and values <0.05 represent good fit. SRMR values <0.10 support acceptable fit, and values <0.08 represent good fit (Hu & Bentler, 1999; McDonald & Ho, 2002).

3.4.4 Missing Data

According to Rubin (1976), there are three assumptions of missingness of data: (1) data are missing completely at random (MCAR); (2) data are missing at random (MAR); (3) data are missing not at random (MNAR). Specifically, under the MAR assumption, the probability of a missing value on a variable X is thought to depend on another observed variable Y , but not on the variable X itself. Missing data analyses were performed to identify potential attrition bias due to missing data. Study participants who had complete data on IPV experiences at all four time points were compared on key study variables to study participants who did not have complete IPV data. Missing data analyses were executed to examine whether complete cases would be significantly different from those who did not have complete data on key study variables. Dummy variables for dependent variables were created to run missing data analyses. Women with complete data ($M=7.3$, $SD=4.4$) had higher levels of symptoms of anxiety than did women with any missing data ($M=6.7$, $SD=4.5$), $t(1,766)=-2.19$, $p=.03$. Women with complete data had more frequent experiences of corporal punishment in childhood ($M=1.6$, $SD=0.5$), as compared to women with

missing data ($M=1.5$, $SD=0.5$), $t(1,880)=-2.35$, $p=.02$. Racial minorities were more likely than Caucasians to be in the group of women with missing data, $\chi^2= 5.73$, $df=1$, $p=.02$. The results of missing data analyses showed that there was no significant difference in the average frequency of childhood experiences of emotional abuse between women with missing data ($M=7.8$, $SD=1.6$) and women with complete data ($M=7.9$, $SD=1.5$), $t(1,880)=-0.88$, $p=.37$. The level of emotion dysregulation in women with missing data ($M=2.1$, $SD=1.9$) was not significantly different from women with complete data ($M=2.2$, $SD=1.8$), $t(1,766)=-0.85$, $p=.40$. No significant difference was revealed for experiences of IPV, symptoms of depression, and perceived neighborhood risk. Given that the data of the current study are missing at random (an ignorable missing mechanism), the missing data on the dependent variables were handled using full information maximum likelihood (FIML) estimation. The FIML estimation has been identified as superior to other traditional methods (e.g., listwise deletion, mean imputation) in that it can yield less biased parameter estimates and lower sampling variability (Enders & Bandalos, 2001).

4.0 Results

In this chapter, descriptive statistics for study variables and characteristics of the study sample are illustrated. Additionally, bivariate correlations among key study variables, and the results of LGCMs are presented. Particularly, model fit statistics and parameter estimates for LGCMs are described to answer the proposed research questions of the study.

4.1 Descriptive Statistics

The descriptive statistics of key study variables and sample characteristics are presented. The average scores of IPV perpetration from ages 19 to 22 (ranges between 10.2 and 10.6) are higher than are the average scores in this group for IPV victimization (ranges between 7.3 and 8.2). The mean score of experiences of childhood emotional abuse was 7.8 ($SD=1.6$); specifically, only 98 participants (5.2%) had no history of childhood emotional abuse. The mean score of childhood experiences of corporal punishment was 1.5 ($SD=0.5$), and almost half of the respondents (48.9%) did not experience corporal punishment in childhood. The mean score of emotion dysregulation was 2.1 ($SD=1.8$), indicating that the respondents exhibited at least two symptoms of emotion dysregulation on average. Regarding mental health problems, the mean levels of symptoms of depression and anxiety were 6.1 ($SD=4.5$) and 6.8 ($SD=4.4$), respectively. The average score of perceived neighborhood risk was 25.6 ($SD=8.5$), suggesting that the study participants perceived some levels of risk in their neighborhoods. As seen in Table 2, the vast majority of the total sample included African Americans (56.2%), followed by Caucasian (38.2%),

those identified as multi-racial (5.0%), and Asian (0.6%). Education level, receipt of public assistance, employment status, and marital status were measured at age 18. In terms of education level, over half of the respondents (57.0%) were identified as having graduated from high school, and 21.3% were attending high school at the time of the survey. Almost all participants (99.2%) reported that they had not receive public assistance, and approximately 45.6% of the participants were working either full time (10.2%) or part time (35.4%).

Table 1 Descriptive Statistics for Key Study Variables (N=1,928)

Variables	Age	<i>M</i>	<i>SD</i>	Min	Max
IPV					
Perpetration					
	19 (Time 1)	10.3	11.7	0	102
	20 (Time 2)	10.6	11.4	0	71
	21 (Time 3)	10.2	10.6	0	78
	22 (Time 4)	10.4	11.2	0	72
Victimization					
	19 (Time 1)	7.3	9.2	0	102
	20 (Time 2)	7.8	9.2	0	75
	21 (Time 3)	7.8	9.0	0	66
	22 (Time 4)	8.2	9.4	0	75
Childhood emotional abuse	8	7.8	1.6	5	15
Childhood corporal punishment	8	1.5	0.5	1	3
Emotion dysregulation	18	2.1	1.8	0	9
Depression	18	6.1	4.5	0	28
Anxiety	18	6.8	4.4	0	24
Neighborhood risk	18	25.6	8.5	17	51

Table 2 Demographic Characteristics of Participants (N=1,928)

Variables	Age	<i>n</i>	%
Race	18		
African American		1,082	56.2
Caucasian		735	38.2
Multi-racial		96	5.0
Asian		11	0.6
Education level	18		
Completed GED		34	4.3
Attending high school		170	21.3
Graduated from high school		454	57.0
Not attending school		75	9.4
Studying for GED		64	8.0
Receipt of public assistance	18		
Yes		1,359	99.2
No		11	0.8
Employment	18		
Homemaker		2	0.1
No, disabled		15	0.9
Not working		945	53.4
Full-time		181	10.2
Part-time		626	35.4
Marital status	18		
Domestic relationship with man		64	3.6
Domestic relationship with woman		3	0.2
Married/Living with spouse		3	0.2
Married but spouse away		1	0.1
Never married		1,696	95.9
Separated		1	0.1

4.2 Bivariate Analyses

Since data on key study variables were not normally distributed, Spearman's Rank Correlation Coefficient and Wilcoxon Rank-Sum test were used to examine correlations. As expected, childhood experiences of emotional abuse and corporal punishment at age 8 were positively associated with risk of IPV perpetration and victimization from ages 19 to 22 years (See Table 3). Similarly, severe symptoms of depression and anxiety and higher levels of perceived neighborhood risk were significantly associated with higher risk of IPV perpetration and victimization across four time points. A history of childhood emotional abuse was positively related to the level of emotion dysregulation ($r_s=.11, p<.001$). Higher levels of emotion dysregulation were associated with severe symptoms of depression ($r_s=.46, p<.001$) and anxiety ($r_s=.41, p<.001$), as well as higher levels of perceived neighborhood risk ($r_s=.24, p<.001$). The results of the Wilcoxon Rank-Sum test showed that racial minorities had significantly higher levels of emotion dysregulation at age 18, as compared to Caucasians ($z=7.52, p<.001$).

Table 3 Correlations Between Key Study Variables (N=1,928)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Childhood emotional abuse	-														
2. Childhood corporal punishment	.49***	-													
3. Emotion dysregulation	.11***	.10***	-												
4. IPV perpetration at age 19	.19***	.12**	.31***	-											
5. IPV perpetration at age 20	.18***	.11***	.30***	.58***	-										
6. IPV perpetration at age 21	.19***	.08**	.34***	.55***	.65***	-									
7. IPV perpetration at age 22	.21***	.13**	.24***	.48***	.57***	.60***	-								
8. IPV victimization at age 19	.18***	.09**	.28***	.90***	.52***	.49***	.38***	-							
9. IPV victimization at age 20	.18***	.09**	.26***	.52***	.89***	.57***	.49***	.53***	-						
10. IPV victimization at age 21	.19***	.08**	.30***	.48***	.57***	.88***	.52***	.50***	.58***	-					
11. IPV victimization at age 22	.19***	.11**	.21***	.40***	.48***	.52***	.89***	.38***	.47***	.52***	-				
12. Depression	.02	-.01	.46***	.20***	.21***	.21***	.22***	.20***	.20***	.21***	.25***	-			
13. Anxiety	.03	.00	.41***	.17***	.16***	.18***	.19***	.16***	.16***	.17***	.21***	.73***	-		
14. Neighborhood risk	.10**	.09**	.24***	.18***	.18***	.19***	.19***	.14***	.15***	.17***	.15**	.21***	.18***	-	
15. Race	.19***	.25***	.18***	.27***	.29***	.25***	.26***	.22***	.24***	.18***	.19***	.03	.08*	.22***	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

4.3 Unconditional LGCMs

The unconditional LGCM for the risk of IPV perpetration provided a good overall fit to the data ($\chi^2(5) = 8.51$, $p = .13$; CFI=.997; TLI=.996; RMSEA=.019, $p = .99$, SRMR=.024). While the average initial level (intercept) of the risk for IPV perpetration was significant ($M_i = 10.02$, $SE = .28$, $z = 36.32$, $p < .001$), the rate of change (slope) in the risk of IPV perpetration was not significant ($M_s = 0.16$, $SE = .13$, $z = 1.27$, $p = .21$). There was a substantial variation across women in initial level of the risk of IPV perpetration ($D_i = 64.61$, $SE = 5.20$, $z = 12.43$, $p < .001$). The unconditional LGCM for the risk of IPV victimization fit the observed data well ($\chi^2(3) = 0.37$, $p = .95$; CFI=1.00; TLI=1.00; RMSEA=.000, $p = 1.00$, SRMR=.005). Noticeably, both mean intercept ($M_i = 7.21$, $SE = .23$, $z = 32.10$, $p < .001$) and slope for the risk of IPV victimization ($M_s = 0.37$, $SE = .12$, $z = 3.16$, $p < .01$) over time were significant. There were significant variances in both

intercept ($D_i=39.19$, $SE=3.84$, $z=10.22$, $p<.001$) and slope factors ($D_s=7.29$, $SE=1.88$, $z=3.89$, $p<.001$) for the risk of IPV victimization. The risk of IPV victimization at age 20 and the risk of IPV victimization at age 21 were significantly correlated ($r=.24$, $p<.001$). Similarly, the risk of IPV victimization at age 21 was significantly associated with the risk of IPV victimization at age 22 ($r=-.62$, $p<.05$). The initial level of the risk for IPV victimization and the rate of change in the risk for IPV victimization over time were significantly correlated ($r=-.31$, $p<.01$). In other words, a higher initial level of the risk of IPV victimization at age 19 was significantly associated with a slower increase in the risk of IPV victimization over time.

4.4 Conditional LGCMs

The conditional LGCM for the risk of IPV perpetration indicated that the model fit the observed data well, ($\chi^2(17) = 20.76$, $p=.24$; CFI=.997; TLI=.995; RMSEA=.011, $p=1.00$, SRMR=.015). Those who had experiences of childhood emotional abuse had significantly higher initial levels of IPV perpetration at age 19 ($\beta=.16$, $p<.001$). In contrast, having childhood experiences of corporal punishment was not associated with the initial level of IPV perpetration at age 19 ($\beta=-.08$, $p=.05$). Of the covariates, severe symptoms of depression ($\beta=.16$, $p<.01$) and higher levels of perceived neighborhood risk ($\beta=.12$, $p<.01$) were significantly associated with higher initial levels of IPV perpetration, whereas symptoms of anxiety did not predict the initial levels of IPV perpetration ($\beta=.05$, $p=.38$). Racial minorities were more likely to have experiences of IPV perpetration at age 19 ($\beta=.31$, $p<.001$) than were those who are Caucasians. Interestingly, neither a history of childhood maltreatment nor the covariates predicted a rate of change in the risk for IPV perpetration.

The model fit of conditional LGCM for the risk of IPV victimization was good, ($\chi^2(16)=11.50, p=.78$; CFI=1.00; TLI=1.00; RMSEA=.000, $p=1.00$, SRMR=.012). Importantly, while women with a history of childhood emotional abuse had higher initial levels of risk of IPV victimization at age 19 ($\beta=.20, p<.001$), women with childhood experiences of corporal punishment had lower initial levels of risk for IPV victimization ($\beta=-.09, p<.05$). Higher initial levels of risk of IPV victimization were related to higher levels of symptoms of depression ($\beta=.20, p<.001$) and higher levels of perceived neighborhood risk ($\beta=.08, p<.05$). Racial minority women were more likely to have experiences of IPV victimization at age 19, as compared to Caucasian women ($\beta=.22, p<.001$). Neither a history of childhood maltreatment nor the covariates were associated with a rate of change in the risk for IPV victimization over time.

Table 4 Parameter Estimates for the Conditional Model of the Risk of IPV Perpetration

Variables	Intercept					Slope				
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	β	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	β
Childhood maltreatment										
Emotional abuse	.80	.20	4.09	<.001	.16***	.00	.09	.00	.998	.00
Corporal punishment	-1.20	.62	-1.96	.050	-.08	.16	.28	.57	.571	.26
Covariates										
Depression	.28	.09	3.06	.002	.16**	.03	.04	.75	.453	.46
Anxiety	.08	.09	.88	.377	.05	.05	.04	1.10	.273	.66
Neighborhood risk	.12	.03	3.37	.001	.12**	-.03	.02	-1.86	.063	-.83
Racial minority	5.11	.60	8.50	<.001	.31***	-.18	.28	-.64	.522	-.28

Note. * $p<.05$, ** $p<.01$, *** $p<.001$.

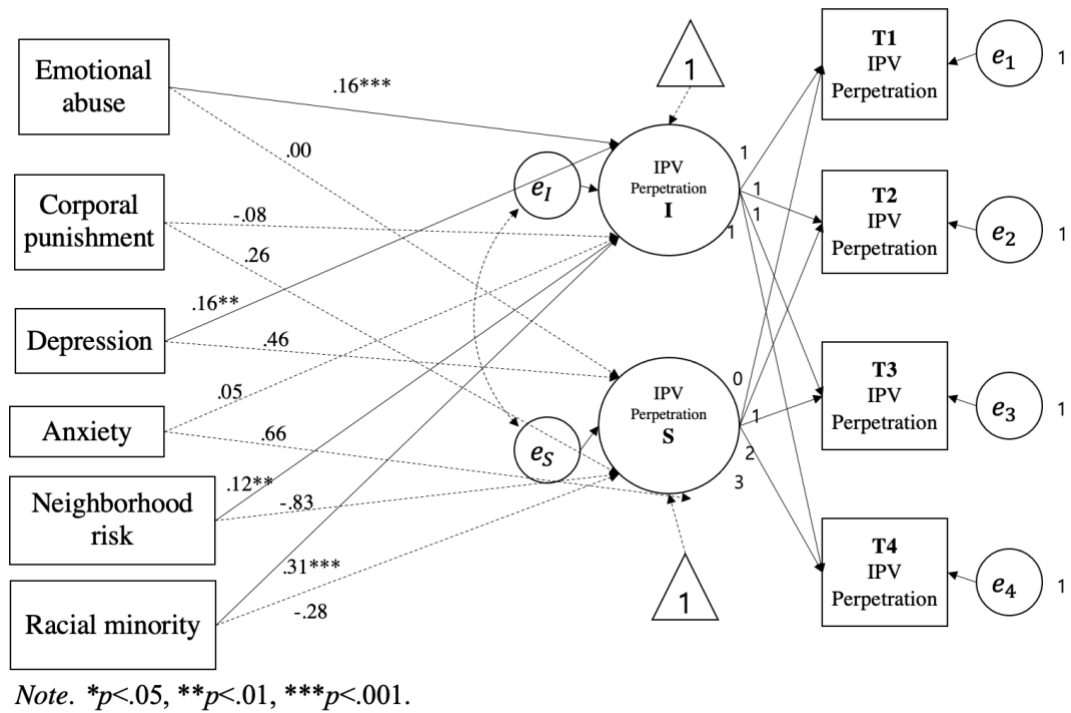


Figure 5 Results of the Conditional Model of the Risk for IPV Perpetration

Table 5 Parameter Estimates for the Conditional Model of the Risk of IPV Victimization

Variables	Intercept					Slope				
	b	SE	z	p	β	b	SE	z	p	β
Childhood maltreatment										
Emotional abuse	.75	.16	4.70	<.001	.20***	-.03	.08	-.32	.752	-.02
Corporal punishment	-1.09	.51	-2.16	.031	-.09*	.26	.26	.97	.331	.07
Covariates										
Depression	.27	.08	3.63	<.001	.20***	.01	.04	.16	.871	.01
Anxiety	.05	.08	.68	.500	.04	.04	.04	1.10	.273	.10
Neighborhood risk	.06	.03	2.13	.033	.08*	-.02	.02	-1.05	.294	-.07
Racial minority	2.81	.49	5.70	<.001	.22***	-.18	.26	-.69	.491	-.04

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

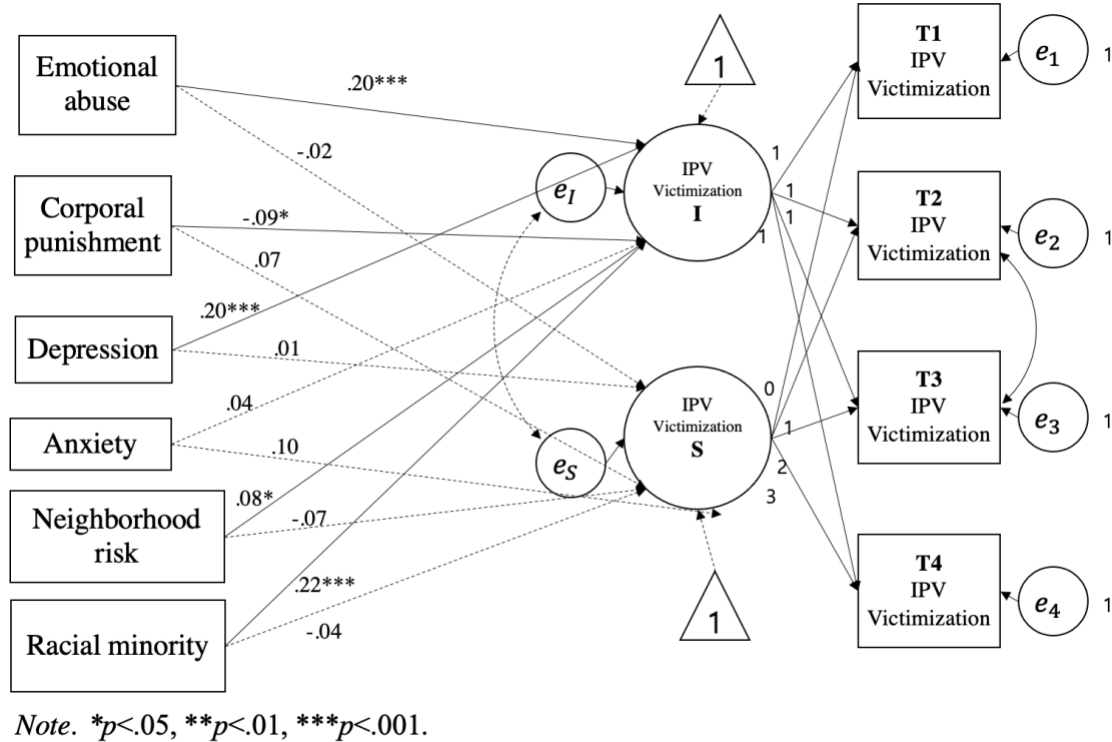


Figure 6 Results of the Conditional Model of the Risk for IPV Victimization

4.5 Mediation Analyses

Direct and indirect effects of emotion dysregulation on the long-term effects of a history of childhood emotional abuse on the risk of IPV exposure were tested while covariates were taken into account. The fit statistics indicated that the model of IPV perpetration fit the data well, ($\chi^2(19) = 18.66, p = .48$; CFI=1.00; TLI=1.00; RMSEA=.000, $p = 1.00$, SRMR=.010). A significant direct effect of childhood experiences of emotional abuse on the initial level of the risk for IPV perpetration was found ($\beta = .15, p < .001$). In addition, childhood experiences of emotional abuse had a direct effect on emotion dysregulation ($\beta = .06, p < .01$). Emotion dysregulation also had a direct effect on the initial level of the risk of IPV perpetration ($\beta = .29, p < .001$). As expected, the

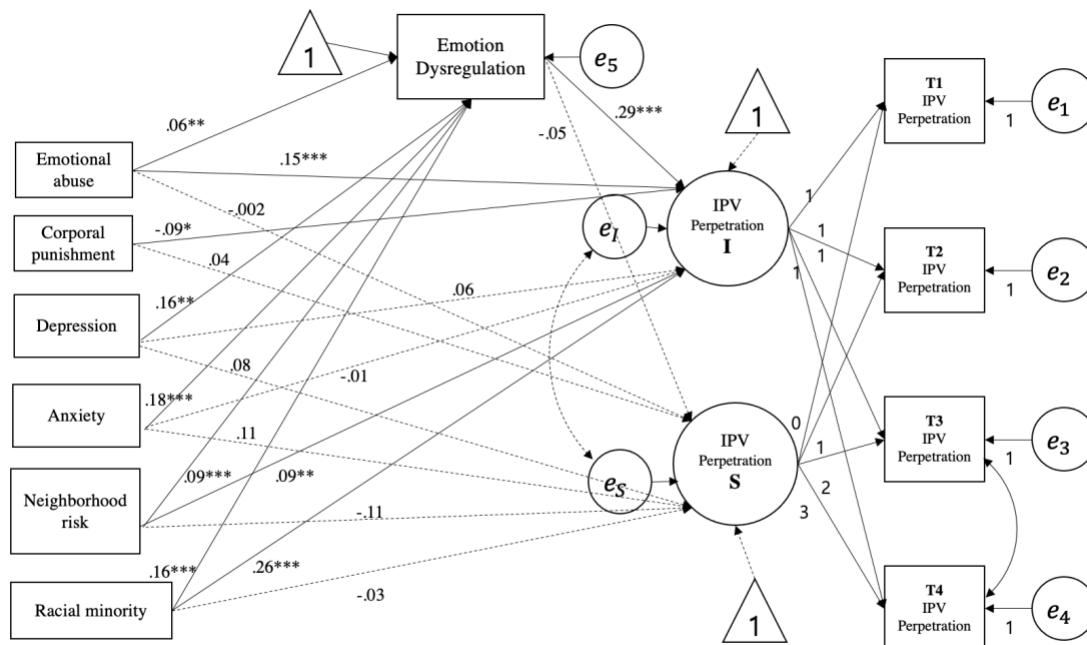
total effect of childhood experiences of emotional abuse on the initial level of the risk of IPV perpetration via emotion dysregulation was significant ($\beta=.17, p<.001$). This finding indicates that emotion dysregulation can play a role in connecting the relationship between a history of childhood emotional abuse and an elevated initial level of risk of IPV perpetration. In contrast, emotion dysregulation was not identified to mediate the indirect effect of a history of childhood emotional abuse on the rate of change in the risk of IPV perpetration.

Additionally, similar patterns were found in the pathways from a history of childhood emotional abuse to the risk of IPV victimization through emotion dysregulation. The overall model fit of the risk of IPV victimization was good ($\chi^2(18)= 14.54, p=.69$; CFI=1.00; TLI=1.00; RMSEA=.000, $p=1.00$, SRMR=.009). As hypothesized, having childhood experiences of emotional abuse had a direct effect on higher levels of emotion dysregulation ($\beta=.06, p<.01$) and higher initial levels of IPV victimization ($\beta=.19, p<.001$). A significant direct effect of emotion dysregulation on the initial level of risk for IPV victimization was found ($\beta=.27, p<.001$). A total effect of childhood emotional abuse on the initial level of the risk for IPV victimization through emotion dysregulation was significant ($\beta=.20, p<.001$). The significant indirect effect suggests that emotion dysregulation can serve as a potential risk factor for increasing the initial level of risk of IPV victimization among women with a history of childhood emotional abuse. In contrast, emotion dysregulation did not significantly mediate the effect of a history of childhood emotional abuse on the rate of change in the risk of IPV victimization.

Table 6 Parameter Estimates for the Path Model of the Risk of IPV Perpetration

	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	β
Direct effects					
Emotional abuse→ Emotion dysregulation	.06	.02	2.70	.007	.06**
Emotional abuse→ Intercept	.75	.19	3.94	<.001	.15***
Emotional abuse→ Slope	-.00	.09	-.04	.970	-.00
Corporal punishment→ Intercept	-1.40	.60	-2.32	.020	-.09*
Corporal punishment→ Slope	.18	.28	.65	.514	.04
Emotion dysregulation→ Intercept	1.28	.17	7.45	<.001	.29***
Emotion dysregulation→ Slope	-.07	.08	-.82	.413	-.05
Indirect effects					
Emotional abuse→ Emotion dysregulation→ Intercept	.08	.03	2.54	.011	.02*
Emotional abuse→ Emotion dysregulation→ Slope	-.00	.01	-.78	.433	-.00
Covariates					
Depression→ Emotion dysregulation	.13	.01	10.84	<.001	.33***
Depression→ Intercept	.10	.09	1.12	.264	.06
Depression→ Slope	.04	.04	.97	.335	.08
Anxiety→ Emotion dysregulation	.08	.01	6.02	<.001	.18***
Anxiety→ Intercept	-.01	.09	-.14	.886	-.01
Anxiety→ Slope	.06	.04	1.29	.198	.11
Neighborhood risk→ Emotion dysregulation	.02	.01	4.30	<.001	.09***
Neighborhood risk→ Intercept	.09	.03	2.64	.008	.09**
Neighborhood risk→ Slope	-.03	.02	-1.73	.083	-.11
Racial minority→ Emotion dysregulation	.60	.08	7.45	<.001	.16***
Racial minority→ Intercept	4.36	.60	7.31	<.001	.26***
Racial minority→ Slope	-.15	.28	-.53	.599	-.03

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.



Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 7 Results of the Path Model of the Risk for IPV Perpetration

Table 7 Parameter Estimates for the Path Model of the Risk of IPV Victimization

	<i>b</i>	<i>SE</i>	<i>z</i>	<i>p</i>	β
Direct effects					
Emotional abuse→ Emotion dysregulation	.06	.02	2.70	.007	.06**
Emotional abuse→ Intercept	.72	.16	4.55	<.001	.19***
Emotional abuse→ Slope	-.02	.08	-.28	.779	-.01
Corporal punishment→ Intercept	-1.24	.50	-2.50	.013	-.10*
Corporal punishment→ Slope	.27	.26	1.02	.310	.05
Emotion dysregulation→ Intercept	.93	.14	6.58	<.001	.27***
Emotion dysregulation→ Slope	-.09	.08	-1.10	.271	-.06
Indirect effects					
Emotional abuse→ Emotion dysregulation→ Intercept	.06	.02	2.50	.013	.02*
Emotional abuse→ Emotion dysregulation→ Slope	-.01	.01	-1.02	.308	-.00
Covariates					
Depression→ Emotion dysregulation	.13	.01	10.84	<.001	.33***
Depression→ Intercept	.15	.08	1.90	.057	.10
Depression→ Slope	.02	.04	.49	.622	.03
Anxiety→ Emotion dysregulation	.08	.01	6.02	<.001	.18***
Anxiety→ Intercept	-.02	.08	-.28	.783	-.02
Anxiety→ Slope	.05	.04	1.29	.197	.09
Neighborhood risk→ Emotion dysregulation	.02	.01	4.30	<.001	.09***
Neighborhood risk→ Intercept	.04	.03	1.49	.136	.06
Neighborhood risk→ Slope	-.01	.02	-.93	.350	-.05
Racial minority→ Emotion dysregulation	.60	.08	7.45	<.001	.16***
Racial minority→ Intercept	2.27	.49	4.64	<.001	.18***
Racial minority→ Slope	-.14	.26	-.55	.585	-.03

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

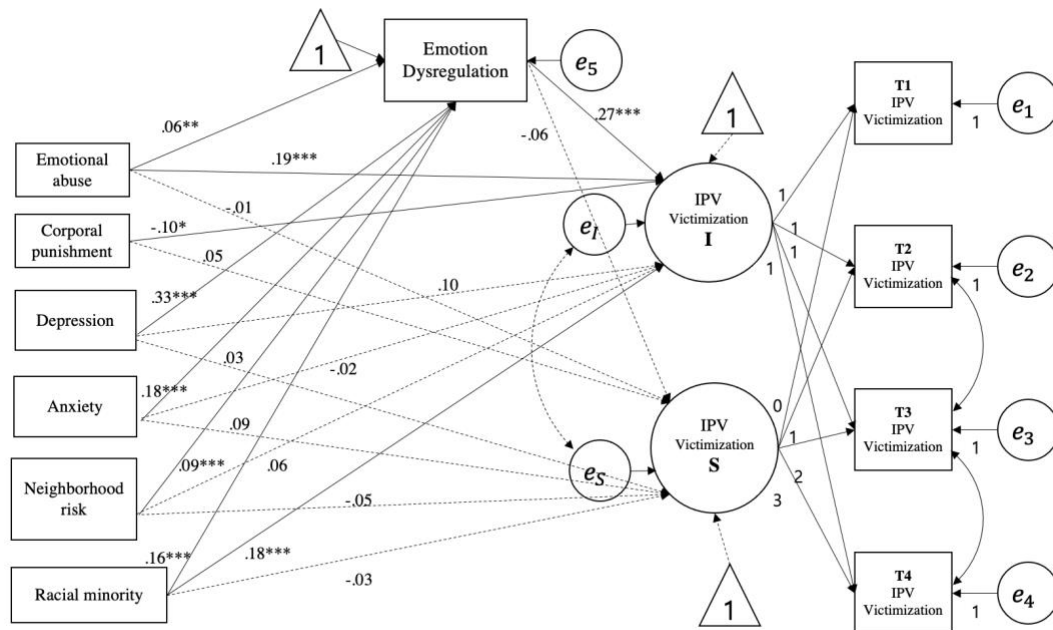


Figure 8 Results of the Path Model of the Risk for IPV Victimization

5.0 Discussion

In this chapter, a summary of key findings of the study are presented first. Given the key findings, existing clinical and policy interventions are then investigated to provide implications for practice and policy. Lastly, limitations of the current study and directions for future research are discussed.

5.1 A Summary of Key Findings

The current study examined growth trajectories of the risk of IPV perpetration and victimization among emerging adult women who had a history of childhood maltreatment. Specifically, drawing on attachment theory, the study hypothesized that women with a history of childhood maltreatment would be less likely to have secure parent-child attachment styles, discouraging them from developing emotional regulation skills. In addition, driven by social learning theory, it was assumed that women with childhood experiences of maltreatment would be likely to learn aggressive behavior and perceive violence as justifiable, placing them at greater risk for being involved in violence later in their lives. Particularly, based on both attachment theory and social learning theory, the study hypothesized that those with experiences of childhood emotional abuse would have difficulties with regulating emotions, which may in turn elevate the risk for IPV exposure in emerging adulthood.

5.2 Analyses of Research Questions

5.2.1 Growth Trajectories of Risk for IPV Exposure (Research Question 1)

First, the study aimed to identify the patterns of growth trajectories of risk for IPV perpetration and victimization in women aged from 19 to 22 years. As hypothesized, the mean initial level (intercept) of IPV perpetration was significant. However, the rate of change (slope) in the risk for IPV perpetration was not significant, showing that there was no significant increase in the rate of growth of risk for IPV perpetration across four years. In contrast, for the risk of IPV victimization, both the initial level and the rate of change were significant. Particularly, the significant positive slope indicates that risk of IPV victimization shows an overall pattern of linear increase from ages 19 to 22.

5.2.2 Childhood Maltreatment and the Trajectories of Risk for IPV Perpetration (Research Question 2)

Next, the study sought to examine whether a history of childhood maltreatment would be associated with the initial level and the rate of change in the risk for IPV perpetration while demographic, neighborhood risk, and mental health problem variables were taken into account. To be specific, the study posited that women with a history of childhood maltreatment would have a higher initial level and a faster rate of change in the risk for IPV perpetration. On the one hand, the conditional LGCM for the risk of IPV perpetration showed that a history of childhood emotional abuse significantly predicted a higher initial level of the risk for IPV perpetration. On the other hand, having childhood experiences of corporal punishment was not associated with a

higher initial level of the risk for IPV perpetration. The non-significant finding on the relationship between experiences of corporal punishment in childhood and the risk for IPV perpetration adds evidence to prior research demonstrating that the pathways from a history of childhood maltreatment to later exposure to IPV vary by specific types of child maltreatment and types of IPV (Berzenski & Yates, 2010; Widom et al., 2014). Specifically, Berzenski & Yates (2010) reported that childhood emotional abuse was the strongest predictor of experiences of IPV perpetration and victimization even after controlling for other types of childhood maltreatment. Berzenski and Yates (2010) also revealed that a history of childhood physical abuse had no effect on later exposure to IPV perpetration, which was also documented in our study. In addition, the current study indicated that higher initial levels of risk for IPV perpetration were significantly associated with severe symptoms of depression and higher levels of perceived neighborhood risk, respectively. Moreover, along with the previous studies (Schafer et al., 2004; Taft et al., 2009), the study found that women from underrepresented racial groups were shown to have a higher likelihood of perpetrating IPV. However, it is notable that neither a history of childhood maltreatment nor covariates predicted the rate of change in the risk of IPV perpetration.

5.2.3 Childhood Maltreatment and the Trajectories of Risk for IPV Victimization

(Research Question 3)

The conditional LGCM for the risk of IPV victimization showed that both experiences of emotional abuse and corporal punishment in childhood were significantly associated with the initial levels of risk for IPV victimization among women. The finding that the risk for IPV victimization was predicted by both types of childhood maltreatment—emotional abuse and corporal punishment—lends supports to prior evidence that women with experiences of any types

of childhood maltreatment have a greater likelihood of being involved in IPV victimization, compared to IPV perpetration (Jung et al., 2019). Importantly, it should be noted that while having a history of childhood emotional abuse predicted higher initial levels of the risk for IPV victimization, having childhood experiences of corporal punishment was associated with lower initial levels of IPV victimization. One possible reason for the negative relationship between experiences of corporal punishment in childhood and the initial level of risk for IPV victimization is that those who are physically abused are likely to tolerate violent intimate partner relationships and perceive IPV as justifiable (Graves et al., 2005; Lim et al., 2015; Valdez et al., 2013). Specifically, one qualitative study indicated that those with a history of childhood physical abuse showed different trajectories from those with a history of childhood emotional abuse (Valdez et al., 2013). More specifically, it was found that women, who had been physically abused in childhood, were more likely to perceive violence as acceptable, normalize violence, and consequently become desensitized to violence. Accordingly, it is possible to assume that desensitization and normalization of violence might lead them to be less likely to realize that they were in abusive relationships and to report experiences of IPV victimization. In contrast, Valdez et al. (2013) reported that women with a history of childhood emotional abuse were shown to have different trajectories; they were more likely to develop negative interpersonal schemas, blame themselves, and internalize feelings of shame and guilt, all of which could elevate the risk of having emotion dysregulation and experiencing IPV victimization. However, since the current study did not measure the study participants' perceptions of violence, it cannot be concluded that the negative relationship is due to desensitization and normalization of violence.

Of the covariates, higher levels of depression and perceived neighborhood risk significantly predicted higher initial levels of IPV victimization. Women from underrepresented

racial groups displayed higher initial levels of IPV victimization, confirming that women from underrepresented groups are at greater risk for experiencing IPV victimization (Breiding, 2014). However, neither having a history of childhood maltreatment nor covariates predicted the rate of change in the risk for IPV victimization over the course of years.

5.2.4 Emotion Dysregulation as a Mediator (Research Question 4)

The current study examined whether emotion dysregulation would play a role in connecting the pathways from a history of childhood emotional abuse to the risk for IPV exposure in adulthood by conducting mediation analyses. The study hypothesized that having a history of childhood emotional abuse would be significantly related to higher levels of emotion dysregulation, which may in turn predict higher initial levels and faster rates of change in the risk for IPV perpetration and victimization. In line with the previous studies, those with a history of childhood emotional abuse were found to have higher levels of emotion dysregulation, which in turn elevated the initial levels of the risk for IPV perpetration and victimization. While the significant indirect effects of childhood maltreatment on later exposure to IPV via emotion dysregulation have also been demonstrated in prior work (Berzenski & Yates, 2010; Iverson et al., 2014; Oliveros & Coleman, 2019), some of these studies have noted that specific constructs of emotion dysregulation, such as impulsivity or anger-related emotion dysregulation, are more salient risk factors connecting the pathways. Despite the significant mediating effects of emotion dysregulation on the initial levels of IPV exposure, emotion dysregulation did not mediate the link between a history of childhood emotional abuse and the rate of change in the risk for IPV perpetration and victimization in the current study, calling for future research to investigate which

specific constructs of emotion dysregulation have particularly stronger effects on elevating the risk of IPV over time.

5.3 Limitations

Although the current study contributes to the extant literature on a significant pathway from a history of childhood maltreatment to later exposure to IPV (Li et al., 2019; 2020; Smyth et al., 2017; Stith et al., 2000), the study failed to document an effect of childhood maltreatment on the rate of change in the risk for IPV exposure over the course of years. The finding on the non-significant effect of childhood maltreatment on the rate of change in the risk of IPV diverges from past research documenting that the risk of IPV increases and peaks during emerging adulthood (early twenties). Nevertheless, the current study is critical in that it examined the effect of a history of childhood maltreatment on the growth trajectories of IPV perpetration and victimization over time using the same sample. Importantly, to the best of our knowledge, this is the first study to use longitudinal data and explore the roles of emotion dysregulation in mediating the effects of a history of childhood emotional abuse on the growth trajectories of the risk for IPV exposure over time.

Despite the strengths of the current study, the results of the study should be considered in light of limitations of the study design. First, the study sample included only women living in a northeastern state in the United States, limiting the generalizability of the study results; thus, future studies should include a larger population across states to improve the generalizability of the study. Second, the study employed retrospective self-report measures of a history of childhood maltreatment, experiences of IPV, and other mental health problems. Particularly, the reliance on

retrospective self-report measures of IPV exposure might lead to recall bias and social desirability, compromising internal validity. Although prior work has identified that there is a lack of discrepancy between self-report measures and official records (Hindelang et al., 1979), future studies need to employ both subjective and objective measures in order to compensate for the limitations of recall bias or social desirability. Third, while a body of literature has suggested that poor romantic relationships and previous experience of IPV are salient risk factors for current experience of IPV (Capaldi et al., 2012; Manchikanti Gómez, 2011), romantic relationships and previous experience of IPV were not assessed in the current study. Hence, the previous experiences of IPV should also be considered in future research. Fourth, although a growing body of research on the intergenerational transmission of violence has identified marital status, exposure to youth violence, or adolescent dating violence as significant factors that affect the link between a history of childhood maltreatment and IPV exposure in adulthood (Fang & Corso, 2007; Franklin & Kercher, 2012; Manchikanti Gómez, 2011), the current study neither measured these diverse factors nor investigated how these multiple factors interplay. Therefore, future studies need to consider measuring diverse factors to better examine the mechanisms by which a history of childhood maltreatment is linked to an elevated risk for exposure to IPV in adulthood. Fifth, although the current study examined the risk of IPV perpetration and victimization using the same sample, the study measured only childhood experiences of emotional abuse and corporal punishment. Given that prior research has revealed that the pathways vary by types of child maltreatment, a variety of types of childhood maltreatment should be assessed in future research. In addition, since only one item was used to assess childhood experiences of corporal punishment, future studies need to employ a reliable and valid measure, which includes multiple items, to evaluate corporal punishment. Lastly, the current study did not investigate whether the study

participants experienced either IPV perpetration or victimization or experienced both. Since the growth trajectories of risk of IPV perpetration and victimization were found to be slightly dissimilar, it is possible assume that those who have experiences of both IPV perpetration and victimization may show different trajectories from those who have experiences of only a single type of IPV. Therefore, future researchers should assess whether it is unidirectional or bidirectional IPV and compare outcomes between these groups, allowing service providers to gain a better understanding of the nature of IPV and design more effective interventions for preventing the cycle of violence.

5.4 Implications for Clinical Practice

The results of the study provide implications for clinical practice in several ways. First, the current study discovered that while the risk (slope) of IPV victimization significantly increased over the course of years, the risk for IPV perpetration did not. From this finding, it is critical for clinicians and social workers to early screen women, especially those who are at high risk for IPV victimization, and to provide the high-risk women with interventions in order to protect them from being exposed to multiple risk factors for IPV victimization. In the current study, a history of childhood maltreatment was identified as a significant risk factor for IPV exposure. Particularly, it was found that women with a history of childhood emotional abuse had a greater likelihood of having higher initial levels of risk for both IPV perpetration and victimization while women with childhood experiences of corporal punishment had lower initial levels of risk for IPV victimization. Given that the risk of IPV perpetration and victimization differs by specific types of child maltreatment, clinicians and social workers need to assess which types of childhood

maltreatment clients have experienced and then tailor interventions according to the types of childhood maltreatment. For example, women with experiences of childhood emotional abuse may need to receive interventions geared towards mitigating emotion dysregulation and the risk for IPV exposure. In contrast, for women with childhood experiences of corporal punishment, clinicians and social workers may need to focus more on helping them perceive violence as unacceptable and unjustifiable, as well as on preventing them from being desensitized to violence. In other words, for those who experienced corporal punishment in childhood, the change in perceptions of violence can play a key role in discouraging them from being desensitized to violence, thereby preventing victimization and revictimization of IPV.

In addition, given that higher levels of symptoms of depression significantly predicted higher initial levels of IPV risk, it is critical for social workers to assess whether clients show symptoms of depression and provide them with referral services or treatments aimed at alleviating symptoms of depression. Moreover, from the finding on the positive relationship between neighborhood risk and IPV risk, it can be argued that social workers should identify which specific neighborhood-level risk factors are more strongly related to an elevated risk of IPV exposure and put more efforts into improving neighborhood environment. More importantly, since emotion dysregulation was found to partially mediate the effects of childhood emotional abuse on later exposure to IPV, it is important to provide women who had a history of childhood emotional abuse with interventions targeting emotion dysregulation. As discussed in earlier sections, it is promising that DBT and EFT can be used as effective interventions for mitigating the risk for emotion dysregulation and IPV among women with a history of childhood maltreatment. Specifically, in order to test the effectiveness of these clinical interventions, further studies need to conduct RCTs, which allow clinicians and social workers to rigorously evaluate the interventions. More

specifically, since it has been identified that IPV is prevalent among women, especially those from underrepresented groups (e.g., racial/ethnic minorities, sexual minorities, or those with intersectional identities), more intervention studies should be replicated to test the effectiveness of the interventions by using a sample of women from underrepresented groups.

5.5 Implications for Policy

The findings of the current study also provide some implications for policy interventions. First, the study discovered that a history of childhood maltreatment is a significant risk factor that elevates the risk for exposure to IPV later in life. From this finding, it can be suggested that there should be legislation that mandates both child welfare service and domestic violence service agencies to use a screening tool for histories of childhood trauma. The assessment of key risk factors for IPV exposure, such as a history of childhood maltreatment, can allow clinicians and social workers to early identify the high-risk populations and provide them with interventions more effectively. Additionally, the current study reviewed earlier work on the risk of the co-occurrence of child maltreatment and IPV and found that the occurrence of IPV can be a proximal indicator of child maltreatment if IPV occurs in the presence of a child. Although this study did not measure the risk of the co-occurrence of child maltreatment and IPV, it is important to develop policy interventions that mitigate the risk for the co-occurrence of child maltreatment and IPV. Specifically, since interagency collaborations between child welfare and domestic violence service entities (e.g., the Greenbook Initiative) have been demonstrated as effective for reducing the risk of IPV and child maltreatment, social workers may need to advocate for increased collaborative work between agencies. Moreover, it is critical to have a clear definition for each type of child

maltreatment. For example, it seems clear that the federal- and state-level policies should specify consistent legal definitions of children's witnessing or hearing an act of IPV as a specific type of child maltreatment (i.e., emotional abuse) to accurately assess the risk of the co-occurrence of IPV and child maltreatment. Furthermore, federal policies should be developed to award grants to states and mandate the states to implement intervention and prevention programs aimed at reducing the risk for both child maltreatment and IPV according to the consistent legal definitions. Importantly, the current study discovered that emotion dysregulation mediated the link between a history of childhood emotional abuse and the risk for IPV in adulthood. From the finding, it seems critical for child welfare service and domestic service agencies to offer therapies or interventions targeting emotion dysregulation and provide evidence on the effectiveness of these interventions. In addition, social workers should play a key role in implementing more evidence-based practice, presenting empirical evidence, and translating research evidence into developing policy. In doing so, social workers can lead policymakers and stakeholders to pay more attention to the issues and can advocate for the development of policy interventions and increased funding for interagency collaborations.

5.6 Directions for Future Research

Based on the limitations of the current study and the extant literature, directions for future research have been suggested. First, a sizable body of previous research has relied heavily upon retrospective self-report measures to assess a history of childhood maltreatment and experiences of IPV, threatening the validity and reliability of the studies. In several studies, for example, mothers were found to underreport IPV victimization if they were concerned about separation from

their children and loss of child custody (Rhodes et al., 2010; Rivera et al., 2012). In addition, the responses about perpetration of child maltreatment might be biased by mothers' social desirability. To improve the validity and reliability, it is important for researchers to collect data by employing both subjective (e.g., self-report measures) and objective measures (e.g., CPS records) and using multiple data sources, such as parents, partners, offspring, direct service workers, police officers, etc. For example, police officer reports can be used to measure IPV, improving the validity (Fantuzzo et al., 1997; 2007).

Another methodological concern is recall bias, which is attributed to the reliance on adult retrospective self-reports of traumatic events. Specifically, it has been reported that trauma survivors tend to distort or forget the traumatic events, such as childhood maltreatment or experiences of IPV victimization in adulthood, contributing to inaccuracy of adult recollections of childhood experiences of maltreatment or lifetime traumatic events (Tajima et al., 2004). In efforts to lower the risk for recall bias, Tajima et al. (2004) employed both prospective parent self-reports and retrospective adolescent self-reports of childhood maltreatment to examine the extent of the correspondence of prospective and retrospective measures. Tajima et al. (2004) found a moderate correspondence between the prospective and retrospective measures, indicating that the adolescent retrospective measures of childhood experiences of maltreatment can be a valid data source. However, the study stressed that researchers need to use prospective measures, which allow them to establish the temporal ordering of the observed relationships.

Third, there are intervention studies using data collected from a clinical sample of study participants who have more severe symptoms of emotion dysregulation or relationship distress than a large population-based sample in community settings, threatening the internal validity (e.g., selection bias, mortality, etc.) and the external validity. For example, as Bohus et al. (2013)

indicated, non-significant improvements in emotion dysregulation might be attributed to the selection of the study sample—PTSD female patients in residential care—who might have high levels of emotion dysregulation; high levels of emotion dysregulation were assumed to result in the attenuated treatment effects of DBT-PTSD on emotion dysregulation. Thus, the results of the intervention studies could be biased due to selection bias.

Another threat to the internal validity, mortality, also needs to be considered when interpreting the results of the intervention studies. In several interventions studies, high attrition rates among female victims of IPV and their accounts of difficulties with consistent engagement in DBT have been reported (Iverson et al., 2009). Specifically, in the context of mortality, assigning the participants with severe psychopathological symptoms to a treatment group might lead to higher dropout rates in the treatment group, resulting in overestimated treatment effects of the interventions. In order to address the threats to the internal validity (i.e., selection bias and mortality), more intervention studies need to be conducted by using rigorous randomized controlled designs with strong comparison conditions. Moreover, collecting follow-up data is expected to identify whether the treatment effects would be biased. However, it should be noted that the results of the intervention studies conducted under residential conditions may not be generalizable to a large population-based sample in community settings, threatening the external validity. Therefore, to demonstrate the effectiveness of treatment for a variety of populations, more replications of studies with a large community-based sample from diverse cultural/ethnic backgrounds are needed.

Fourth, multiple types of childhood maltreatment and IPV were not assessed in a single analysis, calling for future studies to measure a variety of types of child maltreatment and IPV, as well as types of perpetrators and victims in a single analysis. This can help researchers reduce

measurement error and better understand the underlying mechanisms of intergenerational transmission of violence. Fifth, since previous studies with cross-sectional designs could not offer the opportunity to establish the temporal ordering of the study variables (Ahmadabadi et al., 2018; Berzenski & Yates, 2010), more longitudinal studies should be conducted to make causal inferences.

Next, since higher levels of symptoms of depression and perceived neighborhood risk were found to be significantly associated with higher initial levels of risk of IPV exposure, future researchers should consider measuring both individual-level risk factors and socio-cultural risk factors (Barrett, 2010; Taylor et al., 2009; Tracy et al., 2018). Specifically, given that prior literature has also evidenced conduct disorder (Fang et al., 2010) and neighborhood poverty (Cunradi et al., 2000) as a significant risk factor for IPV exposure, it is important for future researchers to examine individual and contextual determinants of IPV to identify key risk factors that can better explain the complex mechanisms of the integrational transmission of violence.

Furthermore, since the effects of emotional abuse are not easily observable due to a lack of consistent measure and definition of emotional abuse, child welfare professionals have difficulties in recognizing and identifying children who are at risk of emotional abuse (Glaser, 2002). Since the current study found that emotional abuse significantly predicted emotion dysregulation, it would be reasonable to develop or employ reliable and standardized assessments of emotion dysregulation, such as GEDM (Newhill et al., 2004), in order to prevent under-recognition of emotional abuse. Also, more studies should be conducted to test whether the assessment of emotion dysregulation would be effective for detecting and reducing risk of emotional abuse. More importantly, not only scholars in child welfare but scholars in other fields of study, such as emotion regulation, should put more emphasis on the development of a reliable and valid measure of

emotional abuse and implementation of intervention and prevention strategies to break the vicious cycle of violence more effectively.

Lastly, the extant literature has explored whether timing of childhood maltreatment would play a role in explaining the relationship between a history of childhood maltreatment and later development outcomes although there is debate on whether earlier or later exposure to child maltreatment would be more deleterious. (Ireland et al., 2002; Mersky et al., 2012; Thornberry et al., 2010). On the one hand, drawing upon life-course perspective, some studies have argued that child maltreatment occurring in adolescence exerts a more deleterious influence on adult outcomes since a more proximal event—adolescent maltreatment—is thought to have a stronger effect on adult outcomes. Additionally, since adolescence is a developmental stage, at which children highly desire autonomy and independence from parents, the maltreated adolescents might be more likely to react against their maltreating parents and become involved in delinquency or violence, increasing the risk for poorer adult outcomes (Ireland et al., 2002). Specifically, Thornberry et al. (2001) examined the impacts of childhood maltreatment on adverse outcomes in adolescence by dividing the sample into four groups: (1) those with a history of early childhood-only maltreatment; (2) those with a history of late childhood-only maltreatment; (3) those with a history of adolescence only-maltreatment; (4) those with a history of both childhood and adolescent maltreatment. In the study, those experiencing child maltreatment only in adolescence (between ages 12 and 17) and those experiencing child maltreatment in both childhood and adolescence were found to be at greater risk for delinquency as well as internalizing and externalizing problems in adolescence whereas those experiencing childhood-limited maltreatment were not. Using longitudinal data, a more recent study examined whether timing of child maltreatment would significantly account for intergenerational transmission of child maltreatment (Augustyn et al.,

2019). Notably, the study discovered that those who first experienced maltreatment in adolescence had a higher possibility of intergenerational transmission of violence than did those with a history of childhood-limited maltreatment.

On the other hand, there is research evidence that early onset of child maltreatment has a larger and longer-lasting effect on adult outcomes than does child maltreatment that first occurs in adolescence (Dunn et al., 2013; Mersky et al., 2012). For example, Mersky et al. (2012) revealed that childhood-limited maltreatment was more strongly associated with an elevated risk of juvenile delinquency and adult crime outcomes, compared to adolescence-limited maltreatment. Dunn et al. (2013) also found that child maltreatment during infancy and early childhood were significantly associated with a heightened risk of depression in young adulthood although this study did not take chronicity of maltreatment into account. Given the mixed results, more future research examining the role of the timing of child maltreatment in the relationship between a history of childhood maltreatment and the risk for IPV in adulthood is warranted.

5.7 Conclusions

In summary, the current study examined the growth trajectories of the risk of IPV among women aged from 19 to 22 years and investigated whether a history of childhood maltreatment would be associated with the initial levels and the rate of change in the risk for IPV perpetration and victimization in emerging adulthood. A history of childhood maltreatment was significantly associated with higher initial levels of risk for IPV. Importantly, a significant mediating role of emotion dysregulation was found in connecting the link between a history of childhood emotional abuse and the initial level of risk of IPV. The findings of the current study can advance the existing

knowledge about the underlying mechanisms of intergenerational transmission of violence and contribute to breaking the cycle of violence while providing important implications for clinical and policy interventions. Specifically, the study highlights the importance of early identification of the high-risk women who have a history of childhood maltreatment, particularly emotional abuse. More importantly, the findings of the study suggest that providing the high-risk women with interventions targeting emotion dysregulation can be more effective for reducing the risk for IPV exposure, discontinuing the intergenerational transmission of violence. In order to gain a deeper understanding of the underlying mechanisms of the intergenerational transmission of violence and generalize the results of the study to a larger population, more future studies need to test the hypothesis of intergenerational transmission of violence by using mixed-method research designs, longitudinal data, and a sample of diverse populations.

Bibliography

- Ahmadabadi, Z., Najman, J. M., Williams, G. M., Clavarino, A. M., d'Abbs, P., & Abajobir, A. A. (2018). Maternal intimate partner violence victimization and child maltreatment. *Child Abuse & Neglect*, 82(Aug 2018), 23-33.
- American Psychological Association. (1994). *Diagnostic and statistical manual of mental disorders: DSM-IV*. Washington, DC: American Psychiatric Association.
- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C. H., Perry, B. D., ... & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), 174-186.
- Anderson, R. E., Edwards, L., Silver, K. E., & Johnson, D. M. (2018). Intergenerational transmission of child abuse: Predictors of child abuse potential among racially diverse women residing in domestic violence shelters. *Child Abuse & Neglect*, 85, 80-90.
- Arnett, J. J. (2000). Emerging adulthood. A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469.
- Augustyn, M. B., Thornberry, T. P., & Henry, K. L. (2019). The reproduction of child maltreatment: An examination of adolescent problem behavior, substance use, and precocious transitions in the link between victimization and perpetration. *Development and Psychopathology*, 31(1), 53-71.
- Axelrod, S. R., Perepletchikova, F., Holtzman, K., & Sinha, R. (2011). Emotion regulation and substance use frequency in women with substance dependence and borderline personality disorder receiving dialectical behavior therapy. *The American Journal of Drug and Alcohol Abuse*, 37(1), 37-42.

- Balsam, K. F., & Szymanski, D. M. (2005). Relationship quality and domestic violence in women's same-sex relationships: The role of minority stress. *Psychology of Women Quarterly*, 29(3), 258-269.
- Bandura, A. (2007). Much ado over a faulty conception of perceived self-efficacy grounded in faulty experimentation. *Journal of Social and Clinical Psychology*, 26(6), 641-658.
- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *The Journal of Abnormal and Social Psychology*, 63(3), 575.
- Bandura, A., & Walters, R. H. (1959). *A study of the influence of child rearing practices and family interrelationships*. New York, NY: Ronald Press.
- Barrett, B. (2010). Childhood sexual abuse and adulthood parenting: The mediating role of intimate partner violence. *Journal of Aggression, Maltreatment & Trauma*, 19(3), 323-346.
- Bartlett, J. D., & Easterbrooks, M. A. (2012). Links between physical abuse in childhood and child neglect among adolescent mothers. *Children and Youth Services Review*, 34(11), 2164-2169.
- Bernstein, D., & Fink, L. (1998). Manual for the childhood trauma questionnaire. New York: The Psychological Corporation.
- Bernstein, D., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., Sapareto, E., & Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, 151(8), 1132-1136.
- Berzenski, S. R., & Yates, T. M. (2010). A developmental process analysis of the contribution of childhood emotional abuse to relationship violence. *Journal of Aggression, Maltreatment & Trauma*, 19(2), 180-203.

- Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., Chen, J., & Stevens, M.R. (2011). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Black, D. S., Sussman, S., & Unger, J. B. (2009). A further look at the intergenerational transmission of violence: Witnessing interparental violence in emerging adulthood. *Journal of Interpersonal Violence*, 25(6), 1022-1042.
doi:10.1177/0886260509340539
- Bohus, M., Dyer, A. S., Priebe, K., Krüger, A., Kleindienst, N., Schmahl, C., ... & Steil, R. (2013). Dialectical behaviour therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder: A randomised controlled trial. *Psychotherapy and Psychosomatics*, 82(4), 221-233.
- Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis*, 39, 350-373.
- Bowlby, J. (1973). *Attachment and loss. Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.
- Bradley, F., Smith, M., Long, J., & O'Dowd, T. (2002). Reported frequency of domestic violence: cross sectional survey of women attending general practice. *Bmj*, 324(7332), 271.
- Breiding, M. J. (2014). Prevalence and characteristics of sexual violence, stalking, and intimate partner violence victimization—National Intimate Partner and Sexual Violence Survey (NISVS): 2011 Summary Report. *Morbidity and Mortality Weekly Report. Surveillance summaries (Washington, DC: 2002)*, 63(8), 1.

- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York: Guilford
- Bulcroft, R., & Straus, M. A. (1975). Validity of husband, wife, and child reports of intrafamily violence and power. *Durham, NH: Family Research Lab, University of New Hampshire, 16.*
- Caldera, D., Burrell, L., Rodriguez, K., Crowne, S. S., Rohde, C., & Duggan, A. (2007). Impact of a statewide home visiting program on parenting and on child health and development. *Child Abuse & Neglect, 31*(8), 829-852.
- Cannon, E. A., Bonomi, A. E., Anderson, M. L., & Rivara, F. P. (2009). The intergenerational transmission of witnessing intimate partner violence. *Archives of Pediatrics & Adolescent Medicine, 163*(8), 706-708.
- Capaldi, D. M., Knoble, N. B., Shortt, J. W., & Kim, H. K. (2012). A systematic review of risk factors for intimate partner violence. *Partner Abuse, 3*(2), 231-280.
- Carvalho, A. F., Lewis, R. J., Derlega, V. J., Winstead, B. A., & Viggiano, C. (2011). Internalized sexual minority stressors and same-sex intimate partner violence. *Journal of Family Violence, 26*(7), 501-509.
- Casanueva, C. E., & Martin, S. L. (2007). Intimate Partner Violence During Pregnancy and Mothers' Child Abuse Potential. *Journal of Interpersonal Violence, 22*(5), 603-622.
- Chaffin, M., Silovsky, J. F., Funderburk, B., Valle, L. A., Brestan, E. V., Balachova, T., ... & Bonner, B. L. (2004). Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. *Journal of Consulting and Clinical Psychology, 72*(3), 500.

- Chan, K. L., Brownridge, D. A., Fong, D. Y., Tiwari, A., Leung, W. C., & Ho, P. C. (2012). Violence against pregnant women can increase the risk of child abuse: A longitudinal study. *Child Abuse & Neglect*, 36(4), 275-284.
- Chang, L., Schwartz, D., Dodge, K. A., & McBride-Chang, C. (2003). Harsh parenting in relation to child emotion regulation and aggression. *Journal of Family Psychology*, 17(4), 598-606. doi:<http://dx.doi.org.pitt.idm.oclc.org/10.1037/0893-3200.17.4.598>
- Chapman, D. P., Whitfield, C. L., Felitti, V. J., Dube, S. R., Edwards, V. J., & Anda, R. F. (2004). Adverse childhood experiences and the risk of depressive disorders in adulthood. *Journal of Affective Disorders*, 82(2), 217-225.
- Charak, R., Villarreal, L., Schmitz, R. M., Hirai, M., & Ford, J. D. (2019). Patterns of childhood maltreatment and intimate partner violence, emotion dysregulation, and mental health symptoms among lesbian, gay, and bisexual emerging adults: A three-step latent class approach. *Child Abuse & Neglect*, 89, 99-110.
- Cloitre, M., Cohen, L. R., & Koenen, K. C. (2006). *Treating survivors of childhood abuse: Psychotherapy for the Interrupted Life*.
- Cole, P. M., Michel, M. K., & Teti, L. O. D. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development*, 59(2-3), 73-102.
- Colman, R. A., & Widom, C. S. (2004). Childhood abuse and neglect and adult intimate relationships: A prospective study. *Child Abuse & Neglect*, 28(11), 1133-1151.
- Conway, C. C., Hipwell, A. E., & Stepp, S. D. (2017). Seven-year course of borderline personality disorder features: borderline pathology is as unstable as depression during adolescence. *Clinical Psychological Science*, 5(4), 742-749.

- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43, 1241.
- Cullen, J. P., Ownbey, J. B., & Ownbey, M. A. (2010). The effects of the Healthy Families America Home Visitation Program on parenting attitudes and practices and child social and emotional competence. *Child and Adolescent Social Work Journal*, 27(5), 335-354.
- Cunradi, C. B., Caetano, R., Clark, C., & Schafer, J. (2000). Neighborhood poverty as a predictor of intimate partner violence among White, Black, and Hispanic couples in the United States: A multilevel analysis. *Annals of Epidemiology*, 10(5), 297-308.
- Curran, P. J., Bauer, D. J., & Willoughby, M. T. (2004). Testing main effects and interactions in latent curve analysis. *Psychological Methods*, 9(2), 220.
- Curran, P. J., Obeidat, K., & Losardo, D. (2010). Twelve frequently asked questions about growth curve modeling. *Journal of Cognition and Development*, 11(2), 121-136.
- Daigneault, I., Hébert, M., & McDuff, P. (2009). Men's and women's childhood sexual abuse and victimization in adult partner relationships: A study of risk factors. *Child Abuse & Neglect*, 33(9), 638-647.
- Dalton, E. J., Greenman, P. S., Classen, C. C., & Johnson, S. M. (2013). Nurturing connections in the aftermath of childhood trauma: A randomized controlled trial of emotionally focused couple therapy for female survivors of childhood abuse. *Couple and Family Psychology: Research and Practice*, 2(3), 209-221.
- Desai, S., Arias, I., Thompson, M. P., & Basile, K. C. (2002). Childhood victimization and subsequent adult revictimization assessed in a nationally representative sample of women and men. *Violence and Victims*, 17(6), 639.
- DiLillo, D., Tremblay, G. C., & Peterson, L. (2000). Linking childhood sexual abuse and abusive

- parenting: The mediating role of maternal anger. *Child Abuse & Neglect*, 24(6), 767-779.
- Dimeff, L., & Linehan, M. M. (2001). Dialectical behavior therapy in a nutshell. *The California Psychologist*, 34(3), 10-13.
- Dixon, L., Browne, K., & Hamilton-Giachritsis, C. (2009). Patterns of risk and protective factors in the intergenerational cycle of maltreatment. *Journal of family Violence*, 24(2), 111-122.
- Dong, M., Anda, R. F., Felitti, V. J., Dube, S. R., Williamson, D. F., Thompson, T. J., ... & Giles, W. H. (2004). The interrelatedness of multiple forms of childhood abuse, neglect, and household dysfunction. *Child Abuse & Neglect*, 28(7), 771-784.
- Driessen, M., Herrmann, J., Stahl, K., Zwaan, M., Meier, S., Hill, A., ... & Petersen, D. (2000). Magnetic resonance imaging volumes of the hippocampus and the amygdala in women with borderline personality disorder and early traumatization. *Archives of General Psychiatry*, 57(12), 1115-1122.
- Dunn, E. C., McLaughlin, K. A., Slopen, N., Rosand, J., & Smoller, J. W. (2013). Developmental timing of child maltreatment and symptoms of depression and suicidal ideation in young adulthood: results from the National Longitudinal Study of Adolescent Health. *Depression and Anxiety*, 30(10), 955-964.
- Edleson, J. L., & Malik, N. M. (2008). Collaborating for family safety: Results from the Greenbook Multisite Evaluation. *Journal of Interpersonal Violence*, 23(7), 871-875.
- Edwards, K. M., Sylaska, K. M., & Neal, A. M. (2015). Intimate partner violence among sexual minority populations: A critical review of the literature and agenda for future research. *Psychology of Violence*, 5(2), 112.
- Egeland, B., & Jacobvitz, D. (1984). Intergenerational continuity of parental abuse: Causes and

- consequences. In *Conference on Biosocial Perspectives in Abuse and Neglect*, York, ME.
- Egeland, B., Jacobvitz, D., & Sroufe, L. A. (1988). Breaking the cycle of abuse. *Child Development*, 59(4), 1080-1088.
- Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, E., Chen, H., & Johnson, J. G. (2003). Intergenerational transmission of partner violence: A 20-year prospective study. *Journal of Consulting and Clinical Psychology*, 71(4), 741.
- Eisenberg, N., & Spinrad, T. (2004). Emotion-Related Regulation: Sharpening the Definition. *Child Development*, 75(2), 334-339.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling*, 8(3), 430-457.
- Fang, X., & Corso, P. S. (2007). Child maltreatment, youth violence, and intimate partner violence: Developmental relationships. *American Journal of Preventive Medicine*, 33(4), 281-290.
- Fang, X., Massetti, G. M., Ouyang, L., Grosse, S. D., & Mercy, J. A. (2010). Attention-deficit/hyperactivity disorder, conduct disorder, and young adult intimate partner violence. *Archives of General Psychiatry*, 67(11), 1179-1186.
- Fantuzzo, J., Boruch, R., Beriama, A., Atkins, M., & Marcus, S. (1997). Domestic violence and children: Prevalence and risk in five major US cities. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(1), 116-122.
- Fantuzzo, J. W., & Fusco, R. A. (2007). Children's direct exposure to types of domestic violence crime: A population-based investigation. *Journal of Family Violence*, 22(7), 543-552.
- Fantuzzo, J. W., Fusco, R. A., Mohr, W. K., & Perry, M. A. (2007). Domestic violence and

- children's presence: A population-based study of law enforcement surveillance of domestic violence. *Journal of Family Violence*, 22(6), 331-340.
- Fearon, R. P., Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., Lapsley, A. M., & Roisman, G. I. (2010). The significance of insecure attachment and disorganization in the development of children's externalizing behavior: a meta-analytic study. *Child Development*, 81(2), 435-456.
- Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2006). Examining the intergenerational transmission of violence in a New Zealand birth cohort. *Child Abuse & Neglect*, 30(2), 89-108.
- Flood, M., & Pease, B. (2009). Factors influencing attitudes to violence against women. *Trauma, Violence, & Abuse*, 10(2), 125-142.
- Foa, E. B., Johnson, K. M., Feeny, N. C., & Treadwell, K. R. (2001). The Child PTSD Symptom Scale: A preliminary examination of its psychometric properties. *Journal of Clinical Child Psychology*, 30(3), 376-384.
- Franklin, C. A., & Kercher, G. A. (2012). The intergenerational transmission of intimate partner violence: Differentiating correlates in a random community sample. *Journal of Family Violence*, 27(3), 187-199.
- Fruzzetti, A., & Levensky, E. (2000). Dialectical behavior therapy for domestic violence: Rationale and procedures. *Cognitive and Behavioral Practice*, 7(4), 435-447.
- Furrow, J. L., Johnson, S. M., & Bradley, B. A. (2011). *The emotionally focused casebook: New directions in treating couples*. Routledge.
- Fusco, R. A. (2015). Second generation mothers in the child welfare system: Factors that predict engagement. *Child and Adolescent Social Work Journal*, 32(6), 545-554.

- Gadow, K., & Sprafkin, J. (1998). Child Symptom Inventory–4 screening manual. *Stony Brook, NY: Checkmate Plus.*
- Gadow, K., Sprafkin, J., & Weiss, M. (2004). Adult self-report inventory-4 manual. *Stony Brook, NY: Checkmate Plus.*
- Gardner, F. L., Moore, Z. E., & Dettore, M. (2014). The relationship between anger, childhood maltreatment, and emotion regulation difficulties in intimate partner and non-intimate partner violent offenders. *Behavior Modification, 38*(6), 779-800.
- Garner, P. W., & Spears, F. M. (2000). Emotion regulation in low-income preschoolers. *Social Development, 9*(2), 246-264.
- George, J., & Stith, S. M. (2014). An updated feminist view of intimate partner violence. *Family Process, 53*(2), 179-193.
- Glaser, D. (2002). Emotional abuse and neglect (psychological maltreatment): A conceptual framework. *Child Abuse & Neglect, 26*(6-7), 697-714.
- Godbout, N., Daspe, M., Lussier, Y., Sabourin, S., Dutton, D., & Hébert, M. (2017). Early exposure to violence, relationship violence, and relationship satisfaction in adolescents and emerging adults: The role of romantic attachment. *Psychological Trauma, 9*(2), 127–137.
- Goodman, M., Carpenter, D., Tang, C. Y., Goldstein, K. E., Avedon, J., Fernandez, N., ... & Siever, L. J. (2014). Dialectical behavior therapy alters emotion regulation and amygdala activity in patients with borderline personality disorder. *Journal of Psychiatric Research, 57*, 108-116.
- Gover, A. R., Kaukinen, C., & Fox, K. A. (2008). The relationship between violence in the family of origin and dating violence among college students. *Journal of Interpersonal*

- Violence*, 23(12), 1667-1693.
- Gratz, K. L., & Gunderson, J. G. (2006). Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder. *Behavior Therapy*, 37(1), 25-35.
- Gratz, K. L., Paulson, A., Jakupcak, M., & Tull, M. T. (2009). Exploring the relationship between childhood maltreatment and intimate partner abuse: Gender differences in the mediating role of emotion dysregulation. *Violence and Victims*, 24(1), 68-82.
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41-54.
- Graves, K. N., Sechrist, S. M., White, J. W., & Paradise, M. J. (2005). Intimate partner violence perpetrated by college women within the context of a history of victimization. *Psychology of Women Quarterly*, 29(3), 278-289.
- Greenberg, L. S., & Johnson, S. M. (1988). *Emotionally focused therapy for couples*. Guilford Press.
- Greenbook National Evaluation Team. (2008). Greenbook Initiative Final Evaluation Report.
- Harding, K., Galano, J., Martin, J., Huntington, L., & Schellenbach, C. J. (2007). Healthy Families America® Effectiveness: A comprehensive review of outcomes. *Journal of Prevention & Intervention in the Community*, 34(1-2), 149-179.
- Hardtke, K. K., Armstrong, M. S., & Johnson, S. (2010). Emotionally focused couple therapy: A full-treatment model well-suited to the specific needs of lesbian couples. *Journal of Couple & Relationship Therapy*, 9(4), 312-326.

- Hatzenbuehler, M. L. (2009). How does sexual minority stigma “get under the skin”? A psychological mediation framework. *Psychological Bulletin*, 135(5), 707.
- Havenhill, K. (2011). *A controlled trial of modified DBT skills training as a partner abuse intervention program*. The Chicago School of Professional Psychology.
- Herrenkohl, T. I., Mason, W. A., Kosterman, R., Lengua, L. J., Hawkins, J. D., & Abbott, R. D. (2004). Pathways from physical childhood abuse to partner violence in young adulthood. *Violence and Victims*, 19(2), 123.
- Hindelang, M. J., Hirschi, T., & Weis, J. G. (1979). Correlates of delinquency: The illusion of discrepancy between self-report and official measures. *American Sociological Review*, 995-1014.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- Ireland, T. O., Smith, C. A., & Thornberry, T. P. (2002). Developmental issues in the impact of child maltreatment on later delinquency and drug use. *Criminology*, 40(2), 359-400.
- Iverson, K. M., McLaughlin, K. A., Adair, K. C., & Monson, C. M. (2014). Anger-related dysregulation as a factor linking childhood physical abuse and interparental violence to intimate partner violence experiences. *Violence and Victims*, 29(4), 564-78.
- Iverson, K. M., Shenk, C., & Fruzzetti, A. E. (2009). Dialectical behavior therapy for women victims of domestic abuse: A pilot study. *Professional Psychology: Research and Practice*, 40(3), 242.
- Jakupcak, M., Lisak, D., & Roemer, L. (2002). The role of masculine ideology and masculine gender role stress in men's perpetration of relationship violence. *Psychology of Men &*

Masculinity, 3(2), 97-106. doi:10.1037/1524-9220.3.2.97

- Jankowski, M. K., Leitenberg, H., Henning, K., & Coffey, P. (1999). Intergenerational transmission of dating aggression as a function of witnessing only same sex parents vs. opposite sex parents vs. both parents as perpetrators of domestic violence. *Journal of Family Violence*, 14(3), 267-279.
- Johnson, W. L., Giordano, P. C., Manning, W. D., & Longmore, M. A. (2015). The age-IPV curve: Changes in intimate partner violence perpetration during adolescence and young adulthood. *Journal of Youth and Adolescence*, 44(3), 708-726. doi:10.1007/s10964-014-0158-z
- Josephson, G. J. (2003). Using an attachment-based intervention with same-sex couples. *Attachment Processes in Couple and Family therapy*, 300-317.
- Jung, H., Herrenkohl, T. I., Skinner, M. L., Lee, J. O., Klika, J. B., & Rousson, A. N. (2019). Gender differences in intimate partner violence: a predictive analysis of IPV by child abuse and domestic violence exposure during early childhood. *Violence Against Women*, 25(8), 903-924.
- Kaufman, E. A., Victor, S. E., Hipwell, A. E., & Stepp, S. D. (2020). Reciprocal influences of parent and adolescent borderline personality symptoms over 3 years. *Journal of Personality Disorders*, 34(Supplement B), 130-145.
- Kaufman, J., & Zigler, E. (1987). Do abused children become abusive parents?. *American Journal of Orthopsychiatry*, 57(2), 186-192.
- Kaufman-Parks, A. M., DeMaris, A., Giordano, P. C., Manning, W. D., & Longmore, M. A. (2018). Intimate partner violence perpetration from adolescence to young adulthood: Trajectories and the role of familial factors. *Journal of Family Violence*, 33(1), 27-41.

- Keenan, K., Hipwell, A., Chung, T., Stepp, S., Stouthamer-Loeber, M., Loeber, R., & McTigue, K. (2010). The Pittsburgh Girls Study: overview and initial findings. *Journal of Clinical Child & Adolescent Psychology, 39*(4), 506-521.
- Kelly, U. A. (2009). "I'm a mother first": The influence of mothering in the decision-making processes of battered immigrant Latino women. *Research in Nursing & Health, 32*(3), 286-297.
- Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental Psychology, 25*(3), 343-354.
- Kwong, M. J., Bartholomew, K., Henderson, A. J., & Trinke, S. J. (2003). The intergenerational transmission of relationship violence. *Journal of Family Psychology, 17*(3), 288.
- Lazarus, S. A., Beardslee, J., Pedersen, S. L., & Stepp, S. D. (2017). A within-person analysis of the association between borderline personality disorder and alcohol use in adolescents. *Journal of Abnormal Child Psychology, 45*(6), 1157-1167.
- Lazarus, S. A., Choukas-Bradley, S., Beeney, J. E., Byrd, A. L., Vine, V., & Stepp, S. D. (2019). Too much too soon?: Borderline personality disorder symptoms and romantic relationships in adolescent girls. *Journal of Abnormal Child Psychology, 47*(12), 1995-2005.
- Lee, M., Reese-Weber, M., & Kahn, J. H. (2014). Exposure to family violence and attachment styles as predictors of dating violence perpetration among men and women: A mediational model. *Journal of Interpersonal Violence, 29*(1), 20-43.
- Lenz, A. S., Del Conte, G., Hollenbaugh, K. M., & Callendar, K. (2016). Emotional regulation

- and interpersonal effectiveness as mechanisms of change for treatment outcomes within a DBT program for adolescents. *Counseling Outcome Research and Evaluation*, 7(2), 73-85.
- Li, S., Zhao, F., & Yu, G. (2019). Childhood maltreatment and intimate partner violence victimization: A meta-analysis. *Child Abuse & Neglect*, 88, 212-224.
- Li, S., Zhao, F., & Yu, G. (2020). A meta-analysis of childhood maltreatment and intimate partner violence perpetration. *Aggression and Violent Behavior*, 50, 101362–. <https://doi.org/10.1016/j.avb.2019.101362>
- Lilly, M. M., London, M. J., & Bridgett, D. J. (2014). Using SEM to examine emotion regulation and revictimization in predicting PTSD symptoms among childhood abuse survivors. *Psychological Trauma: Theory, Research, Practice, and Policy*, 6(6), 644-651.
- Lim, B. H., Valdez, C. E., & Lilly, M. M. (2015). Making meaning out of interpersonal victimization: The narratives of IPV survivors. *Violence Against Women*, 21(9), 1065-1086.
- Linehan, M. M. (1993). *Skills training manual for treating borderline personality disorder*. Guilford Press.
- Linehan, M. (2014). *DBT skills training manual* (Second ed.). New York: The Guilford Press, ebook.
- Loeber, R., Farrington, D., Stouthamer-Loeber, M., & Van Kammen, W. (1998). Antisocial Behavior and Mental Health Problems: Explanatory Factors in Childhood and Adolescence. In *Antisocial Behavior and Mental Health Problems*. Psychology Press.
- Loranger AW, Sartorius N, Andreoli A, Berger P, Buchheim P, Channabasavanna SM, ...

- Ferguson B (1994). The International Personality Disorder Examination. *Archives of General Psychiatry*, 51(3), 215–224.
- MacIntosh, H. B., & Johnson, S. (2008). Emotionally focused therapy for couples and childhood sexual abuse survivors. *Journal of Marital and Family Therapy*, 34(3), 298-315.
- MacMillan, H. L., Wathen, C. N., Barlow, J., Fergusson, D. M., Leventhal, J. M., & Taussig, H. N. (2009). Interventions to prevent child maltreatment and associated impairment. *The Lancet*, 373(9659), 250-266.
- Madigan, S., Cyr, C., Eirich, R., Fearon, R. P., Ly, A., Rash, C., ... & Alink, L. R. (2019). Testing the cycle of maltreatment hypothesis: Meta-analytic evidence of the intergenerational transmission of child maltreatment. *Development and Psychopathology*, 31(1), 23-51.
- Manchikanti Gómez, A. (2011). Testing the cycle of violence hypothesis: Child abuse and adolescent dating violence as predictors of intimate partner violence in young adulthood. *Youth & Society*, 43(1), 171-192. doi:10.1177/0044118X09358313
- Marshall, J. M., Huang, H., & Ryan, J. P. (2011). Intergenerational families in child welfare: Assessing needs and estimating permanency. *Children and Youth Services Review*, 33(6), 1024-1030.
- McDonald, R. P., & Ho, M. H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods*, 7(1), 64.
- McDonald, R., Jouriles, E. N., Ramisetty-Mikler, S., Caetano, R., & Green, C. E. (2006). Estimating the number of American children living in partner-violent families. *Journal of Family Psychology*, 20(1), 137.
- McGuigan, W. M., & Pratt, C. C. (2001). The predictive impact of domestic violence on three

- types of child maltreatment. *Child Abuse & Neglect*, 25(7), 869-883.
- McLaughlin, K. A., Peverill, M., Gold, A. L., Alves, S., & Sheridan, M. A. (2015). Child maltreatment and neural systems underlying emotion regulation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(9), 753-762.
- Meins, E. (2013). *Security of attachment and the social development of cognition*. Psychology press.
- Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2012). Unsafe at any age: Linking childhood and adolescent maltreatment to delinquency and crime. *Journal of Research in Crime and Delinquency*, 49(2), 295-318.
- Messing, J. T. (2011). The social control of family violence. *Affilia*, 26(2), 154-168.
- Meyer, I. H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology of Sexual Orientation and Gender Diversity*, 1, 3-26.
- Millett, L. S., Kohl, P. L., Jonson-Reid, M., Drake, B., & Petra, M. (2013). Child Maltreatment Victimization and Subsequent Perpetration of Young Adult Intimate Partner Violence: An Exploration of Mediating Factors. *Child Maltreatment*, 18(2), 71-84.
- Molnar, B. E., Buka, S. L., Brennan, R. T., Holton, J. K., & Earls, F. (2003). A multilevel study of neighborhoods and parent-to-child physical aggression: Results from the project on human development in Chicago neighborhoods. *Child Maltreatment*, 8(2), 84-97.
- Morton, N., & Browne, K. D. (1998). Theory and observation of attachment and its relation to child maltreatment: A review. *Child Abuse & Neglect*, 22(11), 1093-1104.
- Muller, R. T., Hunter, J. E., & Stollak, G. (1995). The intergenerational transmission of corporal

- punishment: A comparison of social learning and temperament models. *Child Abuse & Neglect*, 19(11), 1323-1335.
- Murphy, L. M. (2011). Childhood and adolescent violent victimization and the risk of young adult intimate partner violence victimization. *Violence and Victims*, 26(5), 593-607.
- National Council of Juvenile and Family Court Judges. Family Violence Department, Schechter, S., & Edleson, J. L. (1999). *Effective intervention in domestic violence & child maltreatment cases: Guidelines for policy and practice: Recommendations*. The Council.
- Newhill, C. E., Bell, M. M., Eack, S. M., & Mulvey, E. P. (2010). Confirmatory factor analysis of the emotion dysregulation measure. *Journal of the Society for Social Work and Research*, 1(3), 159-168.
- Newhill, C. E., Mulvey, E. P., & Pilkonis, P. A. (2004). Initial development of a measure of emotional dysregulation for individuals with cluster B personality disorders. *Research on Social Work Practice*, 14(6), 443-449.
- Ogbonnaya, I. N., Finno-Velasquez, M., & Kohl, P. L. (2015). Domestic violence and immigration status among Latina mothers in the child welfare system: Findings from the National Survey of Child and Adolescent Well-being II (NSCAW II). *Child Abuse & Neglect*, 39, 197-206.
- Oliveros, A. D., & Coleman, A. S. (2019). Does emotion regulation mediate the relation between family-of-origin violence and intimate partner violence?. *Journal of Interpersonal Violence*, 0886260519867146.
- O'Neil, J. M., & Harway, M. (1997). A multivariate model explaining men's violence toward women: Predisposing and triggering hypotheses. *Violence Against Women*, 3(2), 182-203.
- Pandina, R. J., Labouvie, E. W., & White, H. R. (1984). Potential contributions of the life span

- developmental approach to the study of adolescent alcohol and drug use: The Rutgers Health and Human Development Project, a working model. *Journal of Drug Issues*, 14(2), 253-268.
- Parrish, J. W., Lanier, P., Newby-Kew, A., Arvidson, J., & Shanahan, M. (2016). Maternal intimate partner violence victimization before and during pregnancy and postbirth child welfare contact: A population-based assessment. *Child Maltreatment*, 21(1), 26-36.
- Pfohl, B., Blum, N., & Zimmerman, M. (1997). *Structured interview for DSM-IV personality: SIDP-IV*. American Psychiatric Publishing.
- R Core Team (2014). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL: <http://www.R-project.org/>
- Renner, L. M., & Slack, K. S. (2006). Intimate partner violence and child maltreatment: Understanding intra-and intergenerational connections. *Child Abuse & Neglect*, 30(6), 599-617.
- Renner, L. M., & Whitney, S. D. (2012). Risk factors for unidirectional and bidirectional intimate partner violence among young adults. *Child Abuse & Neglect*, 36(1), 40-52.
- Reuter, T. R., Newcomb, M. E., Whitton, S. W., & Mustanski, B. (2017). Intimate partner violence victimization in LGBT young adults: Demographic differences and associations with health behaviors. *Psychology of Violence*, 7(1), 101-109.
- Rhodes, K. V., Cerulli, C., Dichter, M. E., Kothari, C. L., & Barg, F. K. (2010). "I didn't want to put them through that": The influence of children on victim decision-making in intimate partner violence cases. *Journal of Family Violence*, 25(5), 485-493.
- Rivera, E. A., Zeoli, A. M., & Sullivan, C. M. (2012). Abused mothers' safety concerns and court mediators' custody recommendations. *Journal of Family Violence*, 27(4), 321-332.

- Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). *Journal of Statistical Software*, 48(2), 1-36.
- Rubin, D. B. (1976). Inference and missing data. *Biometrika*, 63(3), 581-592.
- Sartor, C. E., Bachrach, R. L., Stepp, S. D., Werner, K. B., Hipwell, A. E., & Chung, T. (2018). The relationship between childhood trauma and alcohol use initiation in Black and White adolescent girls: considering socioeconomic status and neighborhood factors. *Social Psychiatry and Psychiatric Epidemiology*, 53(1), 21-30.
- Schafer, J., Caetano, R., & Cunradi, C. B. (2004). A path model of risk factors for intimate partner violence among couples in the United States. *Journal of Interpersonal Violence*, 19(2), 127-142.
- Scher, C. D., Stein, M. B., Asmundson, G. J., McCreary, D. R., & Forde, D. R. (2001). The childhood trauma questionnaire in a community sample: psychometric properties and normative data. *Journal of Traumatic Stress*, 14(4), 843-857.
- Schmahl, C. G., Vermetten, E., Elzinga, B. M., & Bremner, J. D. (2003). Magnetic resonance imaging of hippocampal and amygdala volume in women with childhood abuse and borderline personality disorder. *Psychiatry Research: Neuroimaging*, 122(3), 193-198.
- Schore, A. N. (2003). Early relational trauma, disorganized attachment, and the development of a predisposition to violence. In M. F. Solomon & D. J. Siegel (Eds.), *Healing trauma: Attachment, mind, body and brain* (pp. 168–207). New York: Norton.
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., ... & Committee on Early Childhood, Adoption, and Dependent Care. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232-e246.
- Siegel, J. P. (2013). Breaking the links in intergenerational violence: An emotional regulation

- perspective. *Family Process*, 52(2), 163-178.
- Simons, R. L., Whitbeck, L. B., Conger, R. D., & Wu, C. I. (1991). Intergenerational transmission of harsh parenting. *Developmental Psychology*, 27(1), 159.
- Skinner, B. F. (1953). *Science and human behavior*. Simon and Schuster.
- Smith, A. L., Cross, D., Winkler, J., Jovanovic, T., & Bradley, B. (2014). Emotional dysregulation and negative affect mediate the relationship between maternal history of child maltreatment and maternal child abuse potential. *Journal of Family Violence*, 29(5), 483-494.
- Smith, D. J., Muir, W. J., & Blackwood, D. H. (2005). Borderline personality disorder characteristics in young adults with recurrent mood disorders: A comparison of bipolar and unipolar depression. *Journal of Affective Disorders*, 87(1), 17-23.
- Smith, L. S., & Stover, C. S. (2016). The moderating role of attachment on the relationship between history of trauma and intimate partner violence victimization. *Violence Against Women*, 22(6), 745-764.
- Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M. J., & Chen, J. (2018). The national intimate partner and sexual violence survey (NISVS): 2015 data brief—updated release. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Smyth, E. J., Gardner, F. L., Marks, D. R., & Moore, Z. E. (2017). An exploration of the mediators between childhood maltreatment and intimate partner violence. *Violence and Victims*, 32(4), 567-583.
- Spangler, G., & Zimmermann, P. (2014). Emotional and adrenocortical regulation in early

- adolescence: Prediction by attachment security and disorganization in infancy. *International Journal of Behavioral Development*, 38(2), 142-154.
- StataCorp. 2019. *Stata Statistical Software: Release 16*. College Station, TX: StataCorp LLC.
- Stepp, S. D., Scott, L. N., Morse, J. Q., Nolf, K. A., Hallquist, M. N., & Pilkonis, P. A. (2014). Emotion dysregulation as a maintenance factor of borderline personality disorder features. *Comprehensive Psychiatry*, 55(3), 657-666.
- Stith, S. M., Rosen, K. H., Middleton, K. A., Busch, A. L., Lundeberg, K., & Carlton, R. P. (2000). The intergenerational transmission of spouse abuse: A meta-analysis. *Journal of Marriage and Family*, 62(3), 640-654.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics (CT) scales. *Journal of Marriage and Family*, 41(1), 75-88.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *Journal of Family Issues*, 17(3), 283-316.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, 22(4), 249-270.
- Styron, T., & Janoff-Bulman, R. (1997). Childhood attachment and abuse: Long-term effects on adult attachment, depression, and conflict resolution. *Child Abuse & Neglect*, 21(10), 1015-1023.
- Suess, G. J., Grossmann, K. E., & Sroufe, L. A. (1992). Effects of infant attachment to mother

- and father on quality of adaptation in preschool: From dyadic to individual organisation of self. *International Journal of Behavioral Development*, 15(1), 43-65.
- Taft, C. T., Bryant-Davis, T., Woodward, H. E., Tillman, S., & Torres, S. E. (2009). Intimate partner violence against African American women: An examination of the socio-cultural context. *Aggression and Violent Behavior*, 14(1), 50-58.
- Tajima, E. A., Herrenkohl, T. I., Huang, B., & Whitney, S. D. (2004). Measuring child maltreatment: A comparison of prospective parent reports and retrospective adolescent reports. *American Journal of Orthopsychiatry*, 74(4), 424-435.
- Taylor, C. A., Guterman, N. B., Lee, S. J., & Rathouz, P. J. (2009). Intimate partner violence, maternal stress, nativity, and risk for maternal maltreatment of young children. *American Journal of Public Health*, 99(1), 175-183.
- Teicher, M. H., Andersen, S. L., Polcari, A., Anderson, C. M., Navalta, C. P., & Kim, D. M. (2003). The neurobiological consequences of early stress and childhood maltreatment. *Neuroscience & Biobehavioral Reviews*, 27(1-2), 33-44.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*, 59(2-3), 25-52.
- Thompson, R. A. (2019). Emotion dysregulation: A theme in search of definition. *Development and Psychopathology*, 1-11.
- Thornberry, T. P., & Henry, K. L. (2013). Intergenerational continuity in maltreatment. *Journal of Abnormal Child Psychology*, 41(4), 555-569.
- Thornberry, T. P., Henry, K. L., Ireland, T. O., & Smith, C. A. (2010). The causal impact of childhood-limited maltreatment and adolescent maltreatment on early adult adjustment. *Journal of Adolescent Health*, 46(4), 359-365.

- Thornberry, T. P., Ireland, T. O., & Smith, C. A. (2001). The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes. *Development and Psychopathology*, 13(4), 957-979.
- Tracy, M., Salo, M., & Appleton, A. A. (2018). The mitigating effects of maternal social support and paternal involvement on the intergenerational transmission of violence. *Child Abuse & Neglect*, 78, 46-59.
- U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2016). *Child maltreatment 2014*. Available from <http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment>.
- U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2018). *Child maltreatment 2016*. Available from <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>.
- U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2019). *Child Maltreatment 2017*. Available from <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>.
- U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2020). *Child Maltreatment 2018*. Available from <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>.
- Valdez, C. E., Lim, B. H. P., & Lilly, M. M. (2013). "It's going to make the whole tower

- crooked”: Victimization trajectories in IPV. *Journal of Family Violence*, 28(2), 131-140.
- van der Kolk, B. A. (2003). The neurobiology of childhood trauma and abuse. *Child and Adolescent Psychiatric Clinics of North America*, 12(2), 293-318.
- Waltz, J. (2003). Dialectical behavior therapy in the treatment of abusive behavior. *Journal of Aggression, Maltreatment & Trauma*, 7(1-2), 75-103.
- White, H. R., & Widom, C. S. (2003). Intimate partner violence among abused and neglected children in young adulthood: The mediating effects of early aggression, antisocial personality, hostility and alcohol problems. *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, 29(4), 332-345.
- Whitfield, C. L., Anda, R. F., Dube, S. R., & Felitti, V. J. (2003). Violent childhood experiences and the risk of intimate partner violence in adults: Assessment in a large health maintenance organization. *Journal of Interpersonal Violence*, 18(2), 166-185.
- Widom, C. (1989). The cycle of violence. *Science (American Association for the Advancement of Science)*, 244(4901), 160-166. doi:10.1126/science.2704995
- Widom, C. S., Czaja, S., & Dutton, M. A. (2014). Child abuse and neglect and intimate partner violence victimization and perpetration: A prospective investigation. *Child Abuse & Neglect*, 38(4), 650-663.
- World Health Organization. (2012). *Understanding and addressing violence against women: Intimate partner violence* (No. WHO/RHR/12.36). World Health Organization.
- Zalewski, M., Stepp, S. D., Whalen, D. J., & Scott, L. N. (2015). A qualitative assessment of the parenting challenges and treatment needs of mothers with borderline personality disorder. *Journal of Psychotherapy Integration*, 25(2), 71.